# **CHAPTER**

# 

# **IGNITION**

(LEAP-1B ENGINES)



# CHAPTER 74 IGNITION

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411	Sep 15/2021		422	Sep 15/2021		607	Sep 15/2021	
412	May 15/2023		423	Sep 15/2021		608	BLANK	
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 $\mbox{A = Added, R = Revised, D = Deleted, O = Overflow, C = Customer Originated Change} \label{eq:control_delta}$ 

# 74-EFFECTIVE PAGES



# CHAPTER 74 IGNITION

CHAPTER SECTION

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# CHAPTER 74 IGNITION

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# **IGNITION - DDG MAINTENANCE PROCEDURES**

# 1. General

- A. This procedure has maintenance tasks for the Master Minimum Equipment List (MMEL) maintenance requirements as shown in the Dispatch Deviations Guide (DDG). These tasks are used to prepare the airplane for flight with certain systems/components inoperative.
- B. This procedure also has the tasks to put the airplane back to its usual condition.
- C. This procedure has these tasks:
  - (1) DDG 74-00-01-02 Right Ignition System Inoperative Preparation
  - (2) DDG 74-00-01-02 Right Ignition System Inoperative Restoration.

#### TASK 74-00-00-040-801-G00

# 2. DDG 74-00-01-02 Right Ignition System Inoperative - Preparation

#### A. General

- (1) This task gives the maintenance steps to prepare the airplane for flight with the right ignition system inoperative.
- (2) These steps connect the associated engine left ignition system to 115V AC standby power.

#### B. References

Reference	Title
31-65-00-750-801	Fault Interrogation for a Maintenance Message (P/B 201)
71-00-00-730-804-G00	Test No. 18 - EEC Channel A Ignition System Test (P/B 501)
71-00-00-730-805-G00	Test No. 19 - EEC Channel B Ignition System Test (P/B 501)

#### C. Location Zones

Zone	Area
211	Flight Compartment - Left
212	Flight Compartment - Right

# D. Right Ignition System Inoperative - Preparation

SUBTASK 74-00-00-860-001-G00

(1) For engine 1, open these circuit breakers and install safety locks:

# **CAPT Electrical System Panel, P18-2**

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
Α	3	C00153	<b>ENGINE 1 IGNITION LEFT</b>

# F/O Electrical System Panel, P6-5

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
Ε	1	C04016	<b>ENGINE 1 IGNITION PWR CONT</b>

SUBTASK 74-00-00-860-002-G00

(2) For engine 2, open these circuit breakers and install safety locks:

#### F/O Electrical System Panel, P6-2

Row	Col	<u>number</u>	<u>name</u>
D	6	C00151	<b>ENGINE 2 IGNITION LEFT</b>

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# F/O Electrical System Panel, P6-5

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
Е	2	C04017	<b>ENGINE 2 IGNITION PWR CONT</b>

#### SUBTASK 74-00-00-710-001-G00

(3) If desired, make sure that the left ignition system is operative as follows:

NOTE: It is permitted to find faults with the right ignition system provided the left ignition system passes Test No. 18 and Test No. 19.

- (a) Do this task: Test No. 18 EEC Channel A Ignition System Test, TASK 71-00-00-730-804-G00.
- (b) Do this task: Test No. 19 EEC Channel B Ignition System Test, TASK 71-00-00-730-805-G00.

#### SUBTASK 74-00-00-810-001-G00

- (4) If it is necessary, turn off the MAINT light on the P5-1 panel as follows:
  - (a) Do this task: Fault Interrogation for a Maintenance Message, TASK 31-65-00-750-801.



#### TASK 74-00-00-440-801-G00

# 3. DDG 74-00-01-02 Right Ignition System Inoperative - Restoration

#### A. General

(1) This task puts the airplane back to its usual condition after operation with the right ignition system inoperative.

#### B. References

Reference	Title
31-65-00-750-801	Fault Interrogation for a Maintenance Message (P/B 201)
71-00-00-730-805-G00	Test No. 19 - EEC Channel B Ignition System Test (P/B 501)

# C. Location Zones

Zone	Area
211	Flight Compartment - Left
212	Flight Compartment - Right

# D. Right Ignition System Inoperative Restoration

SUBTASK 74-00-00-860-003-G00

(1) Close these circuit breakers:

# **CAPT Electrical System Panel, P18-2**

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
Α	3	C00153	<b>ENGINE 1 IGNITION LEFT</b>

# F/O Electrical System Panel, P6-5

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
E	1	C04016	<b>ENGINE 1 IGNITION PWR CONT</b>

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#### SUBTASK 74-00-00-860-004-G00

(2) Close these circuit breakers:

#### F/O Electrical System Panel, P6-2

Row	Col	Number	Name
11011	<u> </u>	1101111001	1101110

D 6 C00151 ENGINE 2 IGNITION LEFT

# F/O Electrical System Panel, P6-5

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
E	2	C04017	<b>ENGINE 2 IGNITION PWR CONT</b>

#### SUBTASK 74-00-00-710-002-G00

- (3) If applicable, make sure that the right ignition system is operative as follows:
  - (a) Do this task: Test No. 19 EEC Channel B Ignition System Test, TASK 71-00-00-730-805-G00.

# SUBTASK 74-00-00-750-001-G00

(4) Uncheck the applicable MAINT light Status Message(s) on the MAINT LIGHT menu (TASK 31-65-00-750-801).

——— END OF TASK ———

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# **IGNITION POWER SUPPLY - INSPECTION/CHECK**

# 1. General

- A. This procedure has one task:
  - (1) Ignition power supply detailed inspection.

#### TASK 74-11-00-211-801-G00

# 2. Ignition Power Supply Detailed Inspection

(Figure 601)

# A. General

(1) This task provides the instructions on how to do the inspection of the ignition exciters.

# B. References

Reference	Title
27-81-00-040-801	Leading Edge Flaps and Slats - Deactivation (P/B 201)
27-81-00-440-801	Leading Edge Flaps and Slats - Activation (P/B 201)
27-81-00-860-804	Leading Edge Flaps and Slats Retraction (P/B 201)
71-00-00-800-804-G00	Power Plant Test Reference Table (P/B 501)
71-11-04-010-801-G00	Open the Fan Cowl Panels (Selection) (P/B 201)
71-11-04-410-801-G00	Close the Fan Cowl Panels (Selection) (P/B 201)
74-11-01-000-801-G00	Left Ignition Exciter (Upper) Removal (P/B 401)
74-11-01-000-802-G00	Right Ignition Exciter (Lower) Removal (P/B 401)
74-11-01-400-801-G00	Left Ignition Exciter (Upper) Installation (P/B 401)
74-11-01-400-802-G00	Right Ignition Exciter (Lower) Installation (P/B 401)
78-31-00-010-801-G00	Open the Thrust Reverser (Selection) (P/B 201)
78-31-00-010-802-G00	Close the Thrust Reverser (Selection) (P/B 201)
78-31-00-040-801-G00	Thrust Reverser Deactivation For Ground Maintenance (P/B 201)
78-31-00-440-801-G00	Thrust Reverser Activation After Ground Maintenance (P/B 201)

# C. Tools/Equipment

Reference	Description
STD-123	Brush - Soft Bristle
STD-664	Pliers - Teflon-jawed (or Equivalent Soft-Jawed)
STD-858	Tag - DO NOT OPERATE

#### D. Consumable Materials

Reference	Description	Specification
B00682 [CP2011]	Solvent - Stoddard	MIL-PRF-680 Type I, II
		or III

# E. Location Zones

Zone	Area	
411	Engine 1 - Engine	
421	Engine 2 - Engine	

#### F. Access Panels

Number	Name/Location
413	Left Fan Cowl, Engine 1

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#### (Continued)

Number	Name/Location
414	Right Fan Cowl, Engine 1
415	Left Thrust Reverser, Engine 1
416	Right Thrust Reverser, Engine 1
423	Left Fan Cowl, Engine 2
424	Right Fan Cowl, Engine 2
425	Left Thrust Reverser, Engine 2
426	Right Thrust Reverser, Engine 2

#### G. Prepare for the Inspection

#### SUBTASK 74-11-00-860-001-G00

- (1) Do these steps to make sure that the ENGINE START switch and the START LEVER switch are not operated:
  - (a) Make sure that the applicable ENGINE START switch, on the P5 overhead panel, is in the AUTO or OFF position.
    - 1) Put a DO NOT OPERATE tag, STD-858, on the applicable ENGINE START switch.
  - (b) Make sure that the applicable START LEVER switch, on the P10 control stand, is in the CUTOFF position.
    - 1) Put a DO NOT OPERATE tag, STD-858, on the applicable START LEVER switch.

#### SUBTASK 74-11-00-865-001-G00

(2) For the applicable engine, open these circuit breakers and install safety tags:

## **CAPT Electrical System Panel, P18-2**

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
Α	1	C00458	<b>ENGINE 1 IGNITION RIGHT</b>
Α	3	C00153	<b>ENGINE 1 IGNITION LEFT</b>

# F/O Electrical System Panel, P6-2

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	4	C00459	<b>ENGINE 2 IGNITION RIGHT</b>
D	6	C00151	<b>ENGINE 2 IGNITION LEFT</b>

# F/O Electrical System Panel, P6-5

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
Ε	1	C04016	<b>ENGINE 1 IGNITION PWR CONT</b>
Ε	2	C04017	<b>ENGINE 2 IGNITION PWR CONT</b>

#### SUBTASK 74-11-00-860-002-G00

(3) Do this task: Leading Edge Flaps and Slats Retraction, TASK 27-81-00-860-804.

## SUBTASK 74-11-00-040-001-G00

(4) Do this task: Leading Edge Flaps and Slats - Deactivation, TASK 27-81-00-040-801.

#### SUBTASK 74-11-00-010-001-G00

(5) Do these tasks in sequence to safely open the left and right thrust reversers on the applicable engine:

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DO THE DEACTIVATION PROCEDURE FOR THE THRUST REVERSER TO PREVENT THE OPERATION OF THE THRUST REVERSER. ACCIDENTAL OPERATION OF THE THRUST REVERSER CAN CAUSE INJURIES TO PERSONS OR DAMAGE TO EQUIPMENT.

- (a) Do this task: Thrust Reverser Deactivation For Ground Maintenance, TASK 78-31-00-040-801-G00.
- (b) Open the applicable left or right fan cowl panels (TASK 71-11-04-010-801-G00).
  - 1) Open these access panels:

<u>Number</u>	Name/Location
413	Left Fan Cowl, Engine 1
414	Right Fan Cowl, Engine 1
423	Left Fan Cowl, Engine 2
424	Right Fan Cowl, Engine 2



OBEY THE INSTRUCTIONS IN THE PROCEDURE TO OPEN THE THRUST REVERSERS. IF YOU DO NOT OBEY THE INSTRUCTIONS, INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT CAN OCCUR.

- (c) Open the applicable left or right thrust reversers (TASK 78-31-00-010-801-G00).
  - 1) Open these access panels:

<u>Number</u>	Name/Location
415	Left Thrust Reverser, Engine 1
416	Right Thrust Reverser, Engine 1
425	Left Thrust Reverser, Engine 2
426	Right Thrust Reverser, Engine 2

# H. Ignition Power Supply Detailed Inspection

SUBTASK 74-11-00-211-001-G00



MAKE SURE THAT THE IGNITION SYSTEM IS OFF FOR FIVE MINUTES BEFORE YOU TOUCH THE COMPONENT. IGNITION VOLTAGE IS HIGH WHICH MAKES IT DANGEROUS. IGNITION VOLTAGE CAN CAUSE INJURIES TO PERSONNEL.

(1) Wait a minimum of five minutes after you remove power from the ignition system before you do the next step.

#### SUBTASK 74-11-00-211-002-G00

(2) If you find damage, replace the ignition exciter 1 [1] or the ignition exciter 2 [4] (TASK 74-11-01-000-801-G00 and TASK 74-11-01-400-801-G00) or (TASK 74-11-01-000-802-G00 and TASK 74-11-01-400-802-G00).

SUBTASK 74-11-00-211-003-G00



MAKE SURE THAT THE ELECTRICAL CONNECTORS AND RECEPTACLES ARE CLEAN AND CLEAR OF UNWANTED MATERIALS BEFORE YOU DISCONNECT, OR CONNECT THEM. CONTAMINATION OF THE ELECTRICAL CONNECTORS AND RECEPTACLES CAN CAUSE DAMAGE TO EQUIPMENT.

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#### (CAUTION PRECEDES)



USE TEFLON-JAWED PLIERS TO LOOSEN ELECTRICAL CONNECTORS. DO NOT USE METAL-JAWED PLIERS. DAMAGE TO THE ELECTRICAL CONNECTORS COULD OCCUR.

(3) Use the teflon-jawed pliers, STD-664 to disconnect the electrical connector [6] and the electrical connector [5] from the ignition exciter 1 [1] and the ignition exciter 2 [4].

SUBTASK 74-11-00-211-004-G00



MAKE SURE THAT YOUR HANDS AND TOOLS ARE CLEAN. DO NOT TOUCH THE IGNITION LEAD WITH DIRT OR GREASE ON HANDS OR TOOLS. DIRT AND GREASE WILL CAUSE DAMAGE TO THE IGNITION LEAD.

(4) Disconnect the ignition lead 1 [2] and the ignition lead 2 [3] from the ignition exciter 1 [1] and the ignition exciter 2 [4].

#### SUBTASK 74-11-00-211-005-G00

- (5) Examine the electrical connector [5], the electrical connector [6], the ignition lead 1 [2] and the ignition lead 2 [3] for thread damage.
  - (a) A 30% damage on one lead-in thread is permitted, or 20% damage to the two lead-in threads.

#### SUBTASK 74-11-00-211-006-G00

- (6) Examine the electrical connector [5] and the electrical connector [6] for pin damage.
  - (a) Loose corroded, burnt, or bent pins are not permitted.
  - (b) Pins must be able to engage freely with the connector.

#### SUBTASK 74-11-00-211-007-G00

- (7) Examine the well of the electrical connector [5] and the electrical connector [6] for dirt.
  - (a) Dirt is not permitted.
  - (b) If you find dirt, clean the well with a soft bristle brush, STD-123 and the solvent, B00682 [CP2011].

## SUBTASK 74-11-00-211-008-G00

(8) Install the protective covers on the electrical connector [5], the electrical connector [6], the ignition lead 1 [2] and the ignition lead 2 [3].

#### SUBTASK 74-11-00-211-009-G00

- (9) Examine the ignition exciter 1 [1] and the ignition exciter 2 [4] for cracks.
  - (a) Cracks are not permitted.

#### SUBTASK 74-11-00-211-010-G00

- (10) Examine the ignition exciter 1 [1] and the ignition exciter 2 [4] for nicks, dents and scratches.
  - (a) All nicks, dents and scratches that are not more than 0.030 in. (0.76 mm) are permitted.

#### SUBTASK 74-11-00-211-011-G00

(11) Connect the ignition lead 1 [2] to the ignition exciter 1 [1] (TASK 74-11-01-400-801-G00).

## SUBTASK 74-11-00-211-012-G00

(12) Connect the ignition lead 2 [3] to the ignition exciter 2 [4] (TASK 74-11-01-400-802-G00).

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SUBTASK 74-11-00-211-013-G00



MAKE SURE THAT THE ELECTRICAL CONNECTORS AND RECEPTACLES ARE CLEAN AND CLEAR OF UNWANTED MATERIALS BEFORE YOU DISCONNECT, OR CONNECT THEM. CONTAMINATION OF THE ELECTRICAL CONNECTORS AND RECEPTACLES CAN CAUSE DAMAGE TO EQUIPMENT.



USE PLIERS THAT HAVE TEFLON JAWS TO TIGHTEN THE ELECTRICAL CONNECTORS. DO NOT USE PLIERS THAT HAVE METAL JAWS. METAL JAWS CAN CAUSE DAMAGE TO THE ELECTRICAL CONNECTORS.

- (13) Use the teflon-jawed pliers, STD-664 to connect the electrical connector [6] and the electrical connector [5] to the ignition exciter 1 [1] and the ignition exciter 2 [4] as follows:
  - (a) Remove the protective covers from the electrical connector [6] and the electrical connector [5].
  - (b) Connect the electrical connector [6] and the electrical connector [5] to the ignition exciter 1 [1] and the ignition exciter 2 [4].
- I. Put the Airplane Back to Its Usual Condition

SUBTASK 74-11-00-410-001-G00



OBEY THE INSTRUCTIONS IN THE PROCEDURE TO CLOSE THE THRUST REVERSERS. IF YOU DO NOT OBEY THE INSTRUCTIONS, INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT CAN OCCUR.

- (1) Do these tasks in sequence to safely close the applicable left or right thrust reversers:
  - (a) Do this task: Close the Thrust Reverser (Selection), TASK 78-31-00-010-802-G00.
    - Close these access panels:

<u>number</u>	Name/Location
415	Left Thrust Reverser, Engine 1
416	Right Thrust Reverser, Engine 1
425	Left Thrust Reverser, Engine 2
426	Right Thrust Reverser, Engine 2

Name // a a a 41 a a

- (b) Do this task: Close the Fan Cowl Panels (Selection), TASK 71-11-04-410-801-G00.
  - Close these access panels:

1
e 1
2
e 2

(c) Do this task: Thrust Reverser Activation After Ground Maintenance, TASK 78-31-00-440-801-G00.

SUBTASK 74-11-00-440-001-G00

(2) Do this task: Leading Edge Flaps and Slats - Activation, TASK 27-81-00-440-801.

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#### SUBTASK 74-11-00-865-002-G00

(3) For the applicable engine, remove the safety tags and close these applicable circuit breakers:

#### **CAPT Electrical System Panel, P18-2**

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
Α	1	C00458	<b>ENGINE 1 IGNITION RIGHT</b>
Α	3	C00153	<b>ENGINE 1 IGNITION LEFT</b>

# F/O Electrical System Panel, P6-2

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	4	C00459	<b>ENGINE 2 IGNITION RIGHT</b>
D	6	C00151	<b>ENGINE 2 IGNITION LEFT</b>

# F/O Electrical System Panel, P6-5

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
Е	1	C04016	<b>ENGINE 1 IGNITION PWR CONT</b>
Е	2	C04017	<b>ENGINE 2 IGNITION PWR CONT</b>

#### SUBTASK 74-11-00-860-007-G00

- (4) Do these steps to remove the DO NOT OPERATE tags, STD-858, from the applicable ENGINE START switch and START LEVER switch:
  - (a) On the P5 overhead panel, remove the DO NOT OPERATE tag, STD-858, from the applicable ENGINE START switch.
  - (b) On the P10 control stand, remove the DO NOT OPERATE tag, STD-858, from the applicable START LEVER switch.

# J. Ignition Exciter Test

- EFFECTIVITY

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SUBTASK 74-11-00-710-001-G00

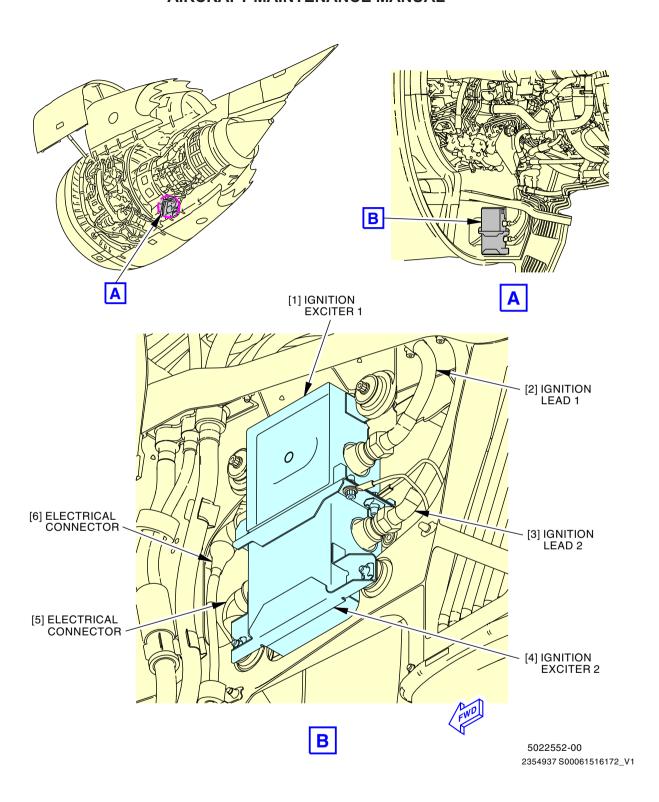
(1) Do the test(s) that are given in the Power Plant Test Reference Table (TASK 71-00-00-800-804-G00).

——— END OF TASK ———

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Ignition Power Supply Inspection Figure 601/74-11-00-990-801-G00

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# **IGNITION EXCITER - REMOVAL/INSTALLATION**

#### 1. General

- A. This procedure has four tasks:
  - (1) Left Ignition Exciter (Upper) Removal
  - (2) Left Ignition Exciter (Upper) Installation
  - (3) Right Ignition Exciter (Lower) Removal
  - (4) Right Ignition Exciter (Lower) Installation.

#### TASK 74-11-01-000-801-G00

# 2. Left Ignition Exciter (Upper) Removal

(Figure 401)

#### A. General

- (1) This task gives the instructions to remove the left ignition exciter.
- (2) The left ignition exciter (upper) is located above the right ignition exciter (lower) on the lower bifurcation.

#### B. References

Reference	Title
70-00-01-910-803-G00	Electrical Connector Disconnection and Connection (P/B 201)
71-11-04-010-801-G00	Open the Fan Cowl Panels (Selection) (P/B 201)
78-31-00-010-801-G00	Open the Thrust Reverser (Selection) (P/B 201)
78-31-00-040-801-G00	Thrust Reverser Deactivation For Ground Maintenance (P/B 201)

# C. Tools/Equipment

Reference	Description
STD-664	Pliers - Teflon-jawed (or Equivalent Soft-Jawed)
STD-858	Tag - DO NOT OPERATE

#### D. Location Zones

Zone	Area
411	Engine 1 - Engine
421	Engine 2 - Engine

# E. Access Panels

Number	Name/Location
413	Left Fan Cowl, Engine 1
415	Left Thrust Reverser, Engine 1
423	Left Fan Cowl, Engine 2
425	Left Thrust Reverser, Engine 2

# F. Prepare for the Removal

SUBTASK 74-11-01-860-001-G00

- (1) Do these steps to make sure that the ENGINE START switch and the START LEVER switch are not operated:
  - (a) Make sure that the applicable ENGINE START switch, on the P5 overhead panel, is in the AUTO or OFF position.

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- 1) Put a DO NOT OPERATE tag, STD-858, on the applicable ENGINE START switch.
- (b) Make sure that the applicable START LEVER switch, on the P10 control stand, is in the CUTOFF position.
  - 1) Put a DO NOT OPERATE tag, STD-858, on the applicable START LEVER switch.

#### SUBTASK 74-11-01-865-001-G00

(2) For the applicable engine, open these circuit breakers and install safety tags:

# **CAPT Electrical System Panel, P18-2**

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
Α	1	C00458	<b>ENGINE 1 IGNITION RIGHT</b>
Α	3	C00153	<b>ENGINE 1 IGNITION LEFT</b>

# F/O Electrical System Panel, P6-2

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	4	C00459	<b>ENGINE 2 IGNITION RIGHT</b>
D	6	C00151	<b>ENGINE 2 IGNITION LEFT</b>

# F/O Electrical System Panel, P6-5

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
Ε	1	C04016	<b>ENGINE 1 IGNITION PWR CONT</b>
Е	2	C04017	<b>ENGINE 2 IGNITION PWR CONT</b>

#### SUBTASK 74-11-01-010-007-G00

(3) Do these tasks in sequence to safely open the left thrust reverser on the applicable engine:



DO THE DEACTIVATION PROCEDURE FOR THE THRUST REVERSER TO PREVENT THE OPERATION OF THE THRUST REVERSER. ACCIDENTAL OPERATION OF THE THRUST REVERSER CAN CAUSE INJURIES TO PERSONS OR DAMAGE TO EQUIPMENT.

- (a) Do this task: Thrust Reverser Deactivation For Ground Maintenance, TASK 78-31-00-040-801-G00.
- (b) Open the applicable left fan cowl panel (TASK 71-11-04-010-801-G00).
  - 1) Open these access panels:

<u>Number</u>	Name/Location		
413	Left Fan Cowl, Engine 1		
423	Left Fan Cowl, Engine 2		



OBEY THE INSTRUCTIONS IN THE PROCEDURE TO OPEN THE THRUST REVERSERS. IF YOU DO NOT OBEY THE INSTRUCTIONS, INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT CAN OCCUR.

- (c) Open the applicable left thrust reverser (TASK 78-31-00-010-801-G00).
  - 1) Open these access panels:

<u>Number</u>	Name/Location
415	Left Thrust Reverser, Engine 1
425	Left Thrust Reverser, Engine 2

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# G. Left Ignition Exciter (Upper) Removal

SUBTASK 74-11-01-010-002-G00



MAKE SURE THAT THE IGNITION SYSTEM IS OFF FOR FIVE MINUTES BEFORE YOU TOUCH THE COMPONENT. IGNITION VOLTAGE IS HIGH WHICH MAKES IT DANGEROUS. IGNITION VOLTAGE CAN CAUSE INJURIES TO PERSONNEL.



MAKE SURE THAT THE ELECTRICAL CONNECTORS AND RECEPTACLES ARE CLEAN AND CLEAR OF UNWANTED MATERIALS BEFORE YOU DISCONNECT, OR CONNECT THEM. CONTAMINATION OF THE ELECTRICAL CONNECTORS AND RECEPTACLES CAN CAUSE DAMAGE TO EQUIPMENT.



USE TEFLON-JAWED PLIERS TO LOOSEN ELECTRICAL CONNECTORS. DO NOT USE METAL-JAWED PLIERS. DAMAGE TO THE ELECTRICAL CONNECTORS COULD OCCUR.

(1) Disconnect the electrical connector [7] from the left ignition exciter (upper) [6] with a teflon-jawed pliers, STD-664 (TASK 70-00-01-910-803-G00).

SUBTASK 74-11-01-020-001-G00



DO NOT TWIST OR BEND THE IGNITION LEADS. DAMAGE TO THE LEADS CAN OCCUR.

(2) Disconnect the left ignition lead [3] from the left ignition exciter (upper) [6] with a teflon-jawed pliers, STD-664 (TASK 70-00-01-910-803-G00).

#### SUBTASK 74-11-01-480-001-G00

(3) Put the protective covers on the electrical receptacles on the left ignition exciter (upper) [6], the electrical connector [7], and the left ignition lead [3].

#### SUBTASK 74-11-01-980-001-G00

(4) Move the left ignition lead [3] away from the left ignition exciter (upper) [6].

#### SUBTASK 74-11-01-020-002-G00

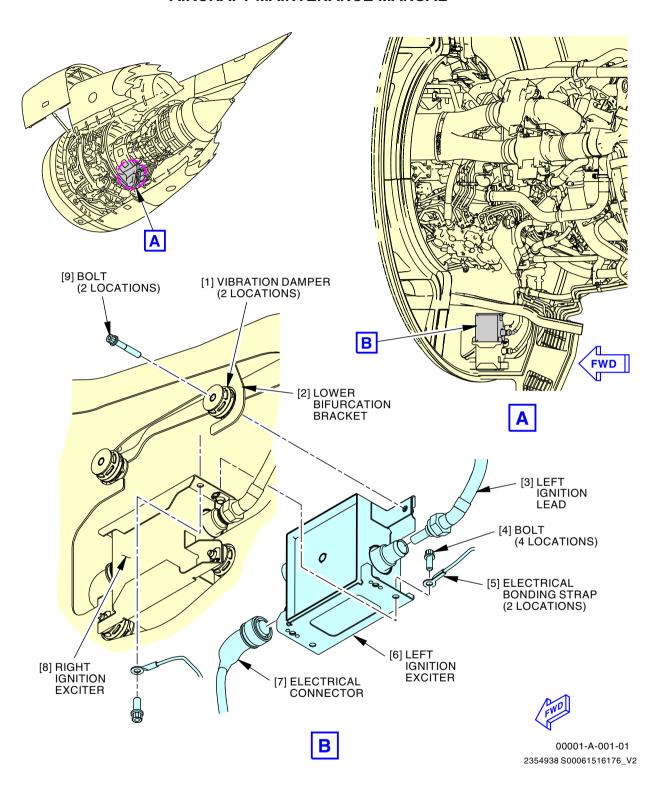
- (5) Do these steps to remove the left ignition exciter (upper) [6]:
  - (a) Remove the two bolts [9] that attach the left ignition exciter (upper) [6] to the vibration damper [1] and the lower bifurcation bracket [2].
  - (b) Remove the four bolts [4] that attach the left ignition exciter (upper) [6] and the electrical bonding straps [5] to the right ignition exciter (lower) [8].
  - (c) Remove the left ignition exciter (upper) [6] from the lower bifurcation bracket [2].
  - (d) Put the left ignition exciter (upper) [6] in a protective bag.

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Left Ignition Exciter (Upper) Installation Figure 401/74-11-01-990-801-G00

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#### TASK 74-11-01-400-801-G00

## 3. Left Ignition Exciter (Upper) Installation

(Figure 401)

#### A. General

(1) This task gives the instructions to install the left ignition exciter (Upper).

#### B. References

Reference	Title
70-00-01-910-803-G00	Electrical Connector Disconnection and Connection (P/B 201)
71-00-00-800-804-G00	Power Plant Test Reference Table (P/B 501)
71-11-04-410-801-G00	Close the Fan Cowl Panels (Selection) (P/B 201)
78-31-00-010-802-G00	Close the Thrust Reverser (Selection) (P/B 201)
78-31-00-440-801-G00	Thrust Reverser Activation After Ground Maintenance (P/B 201)

#### C. Tools/Equipment

Reference	Description
STD-664	Pliers - Teflon-jawed (or Equivalent Soft-Jawed)
STD-858	Tag - DO NOT OPERATE

#### D. Consumable Materials

Reference	Description	Specification
D00599 [CP2442]	Oil - Engine	
D00601 [CP2101]	Vaseline - Graphite Mineral	

#### E. Location Zones

Zone	Area
411	Engine 1 - Engine
421	Engine 2 - Engine

#### F. Access Panels

Number	Name/Location
413	Left Fan Cowl, Engine 1
415	Left Thrust Reverser, Engine 1
423	Left Fan Cowl, Engine 2
425	Left Thrust Reverser, Engine 2

#### G. Left Ignition Exciter (Upper) Installation

SUBTASK 74-11-01-420-001-G00

- (1) Install the left ignition exciter (upper) [6] as follows:
  - (a) Remove the left ignition exciter (upper) [6] from the protective bag.
  - (b) Put the left ignition exciter (upper) [6] in its position on the lower bifurcation bracket [2].
  - (c) Put a light coat of engine oil, D00599 [CP2442] on the threads of the four bolts [4].
  - (d) Put a light coat of graphite mineral vaseline, D00601 [CP2101] on the two bolts [9].
  - (e) Install the four bolts [4] that attach the electrical bonding straps [5] and the left ignition exciter (upper) [6] to the right ignition exciter (lower) [8].
  - (f) Tighten the bolts [4] to 60.0 in-lb (6.8 N·m) 70.0 in-lb (7.9 N·m).
  - (g) Install the two bolts [9] that attach the left ignition exciter (upper) [6] to the vibration damper [1] and the lower bifurcation bracket [2].

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(h) Tighten the bolts [9] to 67.45 in-lb (7.6 N·m) - 74.55 in-lb (8.4 N·m).

SUBTASK 74-11-01-420-002-G00



MAKE SURE THAT THE ELECTRICAL CONNECTORS AND RECEPTACLES ARE CLEAN AND CLEAR OF UNWANTED MATERIALS BEFORE YOU DISCONNECT, OR CONNECT THEM. CONTAMINATION OF THE ELECTRICAL CONNECTORS AND RECEPTACLES CAN CAUSE DAMAGE TO EQUIPMENT.



USE PLIERS THAT HAVE TEFLON JAWS TO TIGHTEN THE ELECTRICAL CONNECTORS. DO NOT USE PLIERS THAT HAVE METAL JAWS. METAL JAWS CAN CAUSE DAMAGE TO THE ELECTRICAL CONNECTORS.



DO NOT TWIST OR BEND THE IGNITION LEADS. DAMAGE TO THE LEADS CAN OCCUR.

- (2) Use the teflon-jawed pliers, STD-664 to connect the left ignition lead [3] to the left ignition exciter (upper) [6] as follows (TASK 70-00-01-910-803-G00):
  - (a) Remove the protective cover from the left ignition lead [3] and the left ignition exciter (upper) [6].
  - (b) Insert the left ignition lead [3] silicone rubber tip into the left ignition exciter (upper) [6].



ENSURE THAT OUTPUT (HIGH TENSION) LEADS ARE CORRECTLY INSTALLED. INSUFFICIENT TORQUE ON LEAD NUTS AT EXCITER AND IGNITER ENDS CAN CAUSE IGNITION RADIATED NOISE WHICH CAN BE PICKED UP BY AIRCRAFT RADIO EQUIPMENT.

(c) Tighten the left ignition lead [3] nut to 138.0 in-lb (15.6 N·m) - 162.0 in-lb (18.3 N·m).

#### SUBTASK 74-11-01-420-003-G00

- (3) Use the teflon-jawed pliers, STD-664 to connect the electrical connector [7] as follows (TASK 70-00-01-910-803-G00):
  - (a) Remove the protective covers from the electrical receptacle on the left ignition exciter (upper) [6] and the electrical connector [7].
  - (b) Connect the electrical connector [7] to the left ignition exciter (upper) [6].
    - 1) Tighten the electrical connector [7].

#### H. Put the Airplane Back to Its Usual Condition

SUBTASK 74-11-01-410-006-G00



OBEY THE INSTRUCTIONS IN THE PROCEDURE TO CLOSE THE THRUST REVERSERS. IF YOU DO NOT OBEY THE INSTRUCTIONS, INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT CAN OCCUR.

- (1) Do these tasks in sequence to safely close the left thrust reverser:
  - (a) Do this task: Close the Thrust Reverser (Selection), TASK 78-31-00-010-802-G00.

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1) Close these access panels:

<u>Number</u>	Name/Location
415	Left Thrust Reverser, Engine 1
425	Left Thrust Reverser, Engine 2

- (b) Close the applicable left Fan Cowl Panel (TASK 71-11-04-410-801-G00).
  - 1) Close these access panels:

<u>Number</u>	Name/Location
413	Left Fan Cowl, Engine 1
423	Left Fan Cowl, Engine 2

(c) Do this task: Thrust Reverser Activation After Ground Maintenance, TASK 78-31-00-440-801-G00.

#### SUBTASK 74-11-01-865-002-G00

(2) For the applicable engine, remove the safety tags and close these applicable circuit breakers:

# **CAPT Electrical System Panel, P18-2**

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
Α	1	C00458	<b>ENGINE 1 IGNITION RIGHT</b>
Α	3	C00153	<b>ENGINE 1 IGNITION LEFT</b>

#### F/O Electrical System Panel, P6-2

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	4	C00459	<b>ENGINE 2 IGNITION RIGHT</b>
D	6	C00151	<b>ENGINE 2 IGNITION LEFT</b>

# F/O Electrical System Panel, P6-5

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
Ε	1	C04016	<b>ENGINE 1 IGNITION PWR CONT</b>
Е	2	C04017	<b>ENGINE 2 IGNITION PWR CONT</b>

#### SUBTASK 74-11-01-860-002-G00

- (3) Do these steps to remove the DO NOT OPERATE tags, STD-858, from the applicable ENGINE START switch and START LEVER switch:
  - (a) On the P5 overhead panel, remove the DO NOT OPERATE tag, STD-858, from the applicable ENGINE START switch.
  - (b) On the P10 control stand, remove the DO NOT OPERATE tag, STD-858, from the applicable START LEVER switch.
- I. Left Ignition Exciter (Upper) Installation Test

SUBTASK 74-11-01-730-001-G00

(1) Do the test(s) that are given in the Power Plant Test Reference Table (TASK 71-00-00-800-804-G00).

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#### TASK 74-11-01-000-802-G00

## 4. Right Ignition Exciter (Lower) Removal

(Figure 402)

#### A. General

- (1) This task gives the instructions to remove the right ignition exciter (lower).
- (2) The right ignition exciter (lower) is located below the left ignition exciter (upper).

#### B. References

Reference	Title
70-00-01-910-803-G00	Electrical Connector Disconnection and Connection (P/B 201)
71-11-04-010-801-G00	Open the Fan Cowl Panels (Selection) (P/B 201)
78-31-00-010-801-G00	Open the Thrust Reverser (Selection) (P/B 201)
78-31-00-040-801-G00	Thrust Reverser Deactivation For Ground Maintenance (P/B 201)

# C. Tools/Equipment

Reference	Description
STD-664	Pliers - Teflon-jawed (or Equivalent Soft-Jawed)
STD-858	Tag - DO NOT OPERATE

#### D. Location Zones

Zone	Area
411	Engine 1 - Engine
421	Engine 2 - Engine

#### E. Access Panels

Number	Name/Location
413	Left Fan Cowl, Engine 1
415	Left Thrust Reverser, Engine 1
423	Left Fan Cowl, Engine 2
425	Left Thrust Reverser, Engine 2

#### F. Prepare for the Removal

SUBTASK 74-11-01-860-003-G00

- (1) Do these steps to make sure that the ENGINE START switch and the START LEVER switch are not operated:
  - (a) Make sure that the applicable ENGINE START switch, on the P5 overhead panel, is in the AUTO or OFF position.
    - 1) Put a DO NOT OPERATE tag, STD-858, on the applicable ENGINE START switch.
  - (b) Make sure that the applicable START LEVER switch, on the P10 control stand, is in the CUTOFF position.
    - 1) Put a DO NOT OPERATE tag, STD-858, on the applicable START LEVER switch.

#### SUBTASK 74-11-01-860-004-G00

(2) For the applicable engine, open these circuit breakers and install safety tags:

#### **CAPT Electrical System Panel, P18-2**

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
Α	1	C00458	<b>FNGINE 1 IGNITION RIGHT</b>

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## **CAPT Electrical System Panel, P18-2**

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
Α	3	C00153	<b>ENGINE 1 IGNITION LEFT</b>

#### F/O Electrical System Panel, P6-2

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	4	C00459	<b>ENGINE 2 IGNITION RIGHT</b>
D	6	C00151	ENGINE 2 IGNITION LEFT

#### F/O Electrical System Panel, P6-5

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
E	1	C04016	<b>ENGINE 1 IGNITION PWR CONT</b>
Е	2	C04017	<b>ENGINE 2 IGNITION PWR CONT</b>

#### SUBTASK 74-11-01-010-008-G00

(3) Do these tasks in sequence to safely open the left thrust reverser on the applicable engine:



DO THE DEACTIVATION PROCEDURE FOR THE THRUST REVERSER TO PREVENT THE OPERATION OF THE THRUST REVERSER. ACCIDENTAL OPERATION OF THE THRUST REVERSER CAN CAUSE INJURIES TO PERSONS OR DAMAGE TO EQUIPMENT.

- (a) Do this task: Thrust Reverser Deactivation For Ground Maintenance, TASK 78-31-00-040-801-G00.
- (b) Open the applicable left fan cowl panel (TASK 71-11-04-010-801-G00).
  - 1) Open these access panels:

<u>Number</u>	Name/Location
413	Left Fan Cowl, Engine 1
423	Left Fan Cowl, Engine 2



OBEY THE INSTRUCTIONS IN THE PROCEDURE TO OPEN THE THRUST REVERSERS. IF YOU DO NOT OBEY THE INSTRUCTIONS, INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT CAN OCCUR.

- (c) Open the applicable left thrust reverser (TASK 78-31-00-010-801-G00).
  - 1) Open these access panels:

<u>Number</u>	Name/Location
415	Left Thrust Reverser, Engine 1
425	Left Thrust Reverser, Engine 2

## G. Right Ignition Exciter Removal

SUBTASK 74-11-01-010-004-G00



MAKE SURE THAT THE IGNITION SYSTEM IS OFF FOR FIVE MINUTES BEFORE YOU TOUCH THE COMPONENT. IGNITION VOLTAGE IS HIGH WHICH MAKES IT DANGEROUS. IGNITION VOLTAGE CAN CAUSE INJURIES TO PERSONNEL.

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#### (WARNING PRECEDES)



MAKE SURE THAT THE ELECTRICAL CONNECTORS AND RECEPTACLES ARE CLEAN AND CLEAR OF UNWANTED MATERIALS BEFORE YOU DISCONNECT, OR CONNECT THEM. CONTAMINATION OF THE ELECTRICAL CONNECTORS AND RECEPTACLES CAN CAUSE DAMAGE TO EQUIPMENT.



USE TEFLON-JAWED PLIERS TO LOOSEN ELECTRICAL CONNECTORS. DO NOT USE METAL-JAWED PLIERS. DAMAGE TO THE ELECTRICAL CONNECTORS COULD OCCUR.

(1) Disconnect the electrical connector [24] from the right ignition exciter (lower) [8] with a teflon-jawed pliers, STD-664 (TASK 70-00-01-910-803-G00).

SUBTASK 74-11-01-010-005-G00



DO NOT TWIST OR BEND THE IGNITION LEADS. DAMAGE TO THE LEADS CAN OCCUR.

(2) Disconnect the right ignition lead [23] from the right ignition exciter (lower) [8] with a teflon-jawed pliers, STD-664 (TASK 70-00-01-910-803-G00).

#### SUBTASK 74-11-01-480-002-G00

(3) Put the protective covers on the electrical receptacles on the right ignition exciter (lower) [8], the electrical connector [24], and the right ignition lead [23].

#### SUBTASK 74-11-01-980-002-G00

(4) Move the right ignition lead [23] away from the right ignition exciter (lower) [8].

#### SUBTASK 74-11-01-010-006-G00

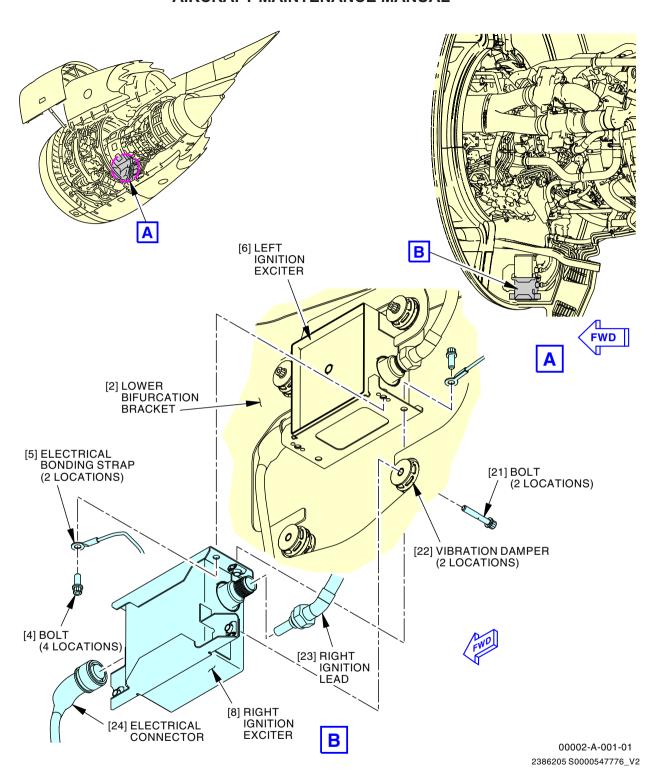
- (5) Do these steps to remove the right ignition exciter (lower) [8]:
  - (a) Remove the four bolts [4] that attach the right ignition exciter (lower) [8] and the electrical bonding strap [5] to the left ignition exciter (upper) [6].
  - (b) Remove the two bolts [21] that attach the right ignition exciter (lower) [8] to the vibration damper [22] and the lower bifurcation bracket [2].
  - (c) Remove the right ignition exciter (lower) [8] from the lower bifurcation bracket [2].
  - (d) Put the right ignition exciter (lower) [8] in a protective bag.

——— END OF TASK ———	
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Right Ignition Exciter (Lower) Installation Figure 402/74-11-01-990-802-G00

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#### TASK 74-11-01-400-802-G00

## 5. Right Ignition Exciter (Lower) Installation

(Figure 402)

#### A. General

(1) This task gives the instructions to install the right ignition exciter (lower).

#### B. References

Reference	Title
70-00-01-910-803-G00	Electrical Connector Disconnection and Connection (P/B 201)
71-00-00-800-804-G00	Power Plant Test Reference Table (P/B 501)
71-11-04-410-801-G00	Close the Fan Cowl Panels (Selection) (P/B 201)
78-31-00-010-802-G00	Close the Thrust Reverser (Selection) (P/B 201)
78-31-00-440-801-G00	Thrust Reverser Activation After Ground Maintenance (P/B 201)

#### C. Tools/Equipment

Reference	Description
STD-664	Pliers - Teflon-jawed (or Equivalent Soft-Jawed)
STD-858	Tag - DO NOT OPERATE

# D. Consumable Materials

Reference	Description	Specification
D00599 [CP2442]	Oil - Engine	
D00601 [CP2101]	Vaseline - Graphite Mineral	

#### E. Location Zones

Zone	Area
411	Engine 1 - Engine
421	Engine 2 - Engine

#### F. Access Panels

Number	Name/Location
413	Left Fan Cowl, Engine 1
415	Left Thrust Reverser, Engine 1
423	Left Fan Cowl, Engine 2
425	Left Thrust Reverser, Engine 2

#### G. Right Ignition Exciter (Lower) Installation

SUBTASK 74-11-01-410-002-G00

- (1) Install the right ignition exciter (lower) [8] as follows:
  - (a) Remove the right ignition exciter (lower) [8] from the protective bag.
  - (b) Put the right ignition exciter (lower) [8] in its position on the lower bifurcation bracket [2].
  - (c) Put a light coat of engine oil, D00599 [CP2442] on the threads of the four bolts [4].
  - (d) Put a light coat of graphite mineral vaseline, D00601 [CP2101] on the two bolts [21].
  - (e) Install the four bolts [4] that attach the electrical bonding straps [5] and the left ignition exciter (upper) [6] to the right ignition exciter (lower) [8].
  - (f) Tighten the bolts [4] to 60.0 in-lb (6.8 N·m) 70.0 in-lb (7.9 N·m).
  - (g) Install the two bolts [21] that attach the right ignition exciter (lower) [8] to the vibration damper [22] and the lower bifurcation bracket [2].

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(h) Tighten the bolts [21] to 67.45 in-lb (7.6 N·m) - 74.55 in-lb (8.4 N·m).

SUBTASK 74-11-01-410-003-G00



MAKE SURE THAT THE ELECTRICAL CONNECTORS AND RECEPTACLES ARE CLEAN AND CLEAR OF UNWANTED MATERIALS BEFORE YOU DISCONNECT, OR CONNECT THEM. CONTAMINATION OF THE ELECTRICAL CONNECTORS AND RECEPTACLES CAN CAUSE DAMAGE TO EQUIPMENT.



USE PLIERS THAT HAVE TEFLON JAWS TO TIGHTEN THE ELECTRICAL CONNECTORS. DO NOT USE PLIERS THAT HAVE METAL JAWS. METAL JAWS CAN CAUSE DAMAGE TO THE ELECTRICAL CONNECTORS.



DO NOT TWIST OR BEND THE IGNITION LEADS. DAMAGE TO THE LEADS CAN OCCUR.

- (2) Use the teflon-jawed pliers, STD-664 to connect the right ignition lead [23] to the right ignition exciter (lower) [8] as follows (TASK 70-00-01-910-803-G00):
  - (a) Remove the protective cover from the right ignition lead [23] and the right ignition exciter (lower) [8].
  - (b) Insert the right ignition lead [23] silicone rubber tip into the right ignition exciter (lower) [8].



ENSURE THAT OUTPUT (HIGH TENSION) LEADS ARE CORRECTLY INSTALLED. INSUFFICIENT TORQUE ON LEAD NUTS AT EXCITER AND IGNITER ENDS CAN CAUSE IGNITION RADIATED NOISE WHICH CAN BE PICKED UP BY AIRCRAFT RADIO EQUIPMENT.

(c) Tighten the right ignition lead [23] nut to 138.0 in-lb (15.6 N·m) - 162.0 in-lb (18.3 N·m).

#### SUBTASK 74-11-01-410-004-G00

- (3) Use the teflon-jawed pliers, STD-664 to connect the electrical connector [24] as follows (TASK 70-00-01-910-803-G00):
  - (a) Remove the protective covers from the electrical receptacle on the right ignition exciter (lower) [8] and the electrical connector [24].
  - (b) Connect the electrical connector [24] to the right ignition exciter (lower) [8].
    - 1) Tighten the electrical connector [24].

#### H. Put the Airplane Back to Its Usual Condition

SUBTASK 74-11-01-410-007-G00



OBEY THE INSTRUCTIONS IN THE PROCEDURE TO CLOSE THE THRUST REVERSERS. IF YOU DO NOT OBEY THE INSTRUCTIONS, INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT CAN OCCUR.

- (1) Do these tasks in sequence to safely close the left thrust reverser:
  - (a) Do this task: Close the Thrust Reverser (Selection), TASK 78-31-00-010-802-G00.

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Close these access panels:

<u>Number</u>	Name/Location
415	Left Thrust Reverser, Engine 1
425	Left Thrust Reverser, Engine 2

- (b) Close the applicable left Fan Cowl Panel (TASK 71-11-04-410-801-G00).
  - 1) Close these access panels:

<u>Number</u>	Name/Location
413	Left Fan Cowl, Engine 1
423	Left Fan Cowl, Engine 2

(c) Do this task: Thrust Reverser Activation After Ground Maintenance, TASK 78-31-00-440-801-G00.

#### SUBTASK 74-11-01-860-005-G00

(2) For the applicable engine, remove the safety tags and close these applicable circuit breakers:

# **CAPT Electrical System Panel, P18-2**

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
Α	1	C00458	<b>ENGINE 1 IGNITION RIGHT</b>
Α	3	C00153	<b>ENGINE 1 IGNITION LEFT</b>

#### F/O Electrical System Panel, P6-2

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	4	C00459	<b>ENGINE 2 IGNITION RIGHT</b>
D	6	C00151	<b>ENGINE 2 IGNITION LEFT</b>

# F/O Electrical System Panel, P6-5

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
Ε	1	C04016	<b>ENGINE 1 IGNITION PWR CONT</b>
Ε	2	C04017	<b>ENGINE 2 IGNITION PWR CONT</b>

#### SUBTASK 74-11-01-860-006-G00

- (3) Do these steps to remove the DO NOT OPERATE tags, STD-858, from the applicable ENGINE START switch and START LEVER switch:
  - (a) On the P5 overhead panel, remove the DO NOT OPERATE tag, STD-858, from the applicable ENGINE START switch.
  - (b) On the P10 control stand, remove the DO NOT OPERATE tag, STD-858, from the applicable START LEVER switch.
- I. Right Ignition Exciter (Lower) Installation Test

SUBTASK 74-11-01-730-002-G00

- EFFECTIVITY ·

(1) Do the test(s) that are given in the Power Plant Test Reference Table (TASK 71-00-00-800-804-G00).

	<b>END</b>	OF	<b>TASK</b>	
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# HIGH TENSION IGNITION DISTRIBUTION - INSPECTION/CHECK

# 1. General

- A. This procedure has one task:
  - (1) High tension ignition distribution detailed inspection.

#### TASK 74-21-00-211-801-G00

# 2. High Tension Ignition Distribution Detailed Inspection

(Figure 601)

# A. General

(1) This task provides the instructions on how to do the detailed inspection of the ignition system.

# B. References

Reference	Title
27-81-00-040-801	Leading Edge Flaps and Slats - Deactivation (P/B 201)
27-81-00-440-801	Leading Edge Flaps and Slats - Activation (P/B 201)
27-81-00-860-804	Leading Edge Flaps and Slats Retraction (P/B 201)
71-11-04-010-801-G00	Open the Fan Cowl Panels (Selection) (P/B 201)
71-11-04-410-801-G00	Close the Fan Cowl Panels (Selection) (P/B 201)
74-21-01-000-801-G00	Left Ignition Lead Removal (P/B 401)
74-21-01-000-802-G00	Right Ignition Lead Removal (P/B 401)
74-21-01-400-801-G00	Left Ignition Lead Installation (P/B 401)
74-21-01-400-802-G00	Right Ignition Lead Installation (P/B 401)
78-31-00-010-801-G00	Open the Thrust Reverser (Selection) (P/B 201)
78-31-00-010-802-G00	Close the Thrust Reverser (Selection) (P/B 201)
78-31-00-040-801-G00	Thrust Reverser Deactivation For Ground Maintenance (P/B 201)
78-31-00-440-801-G00	Thrust Reverser Activation After Ground Maintenance (P/B 201)

# C. Tools/Equipment

Reference	Description
STD-858	Tag - DO NOT OPERATE
STD-8416	Cutter - Wire, Diagonal or Side, 6 in. (150 mm)

# D. Consumable Materials

Reference	Description	Specification
B00676 [CP1041]	Alcohol - Isopropyl	
G00834	Cloth - Lint-free Cotton	

# E. Location Zones

Zone	Area	
411	Engine 1 - Engine	
421	Engine 2 - Engine	

# F. Access Panels

Number	Name/Location
413	Left Fan Cowl, Engine 1
415	Left Thrust Reverser, Engine 1
423	Left Fan Cowl, Engine 2

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#### (Continued)

Number	Name/Location
425	Left Thrust Reverser, Engine 2

#### G. Prepare for the Inspection

#### SUBTASK 74-21-00-860-001-G00

- (1) Do these steps to make sure that the ENGINE START switch and the START LEVER switch are not operated:
  - (a) Make sure that the applicable ENGINE START switch, on the P5 overhead panel, is in the AUTO or OFF position.
    - 1) Put a DO NOT OPERATE tag, STD-858, on the applicable ENGINE START switch.
  - (b) Make sure that the applicable START LEVER switch, on the P10 control stand, is in the CUTOFF position.
    - 1) Put a DO NOT OPERATE tag, STD-858, on the applicable START LEVER switch.

#### SUBTASK 74-21-00-860-002-G00

(2) For the applicable engine, open these circuit breakers and install safety tags:

#### **CAPT Electrical System Panel, P18-2**

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
Α	1	C00458	<b>ENGINE 1 IGNITION RIGHT</b>
Α	3	C00153	<b>ENGINE 1 IGNITION LEFT</b>

# F/O Electrical System Panel, P6-2

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	4	C00459	<b>ENGINE 2 IGNITION RIGHT</b>
D	6	C00151	<b>ENGINE 2 IGNITION LEFT</b>

#### F/O Electrical System Panel, P6-5

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
Ε	1	C04016	<b>ENGINE 1 IGNITION PWR CONT</b>
Е	2	C04017	<b>ENGINE 2 IGNITION PWR CONT</b>

#### SUBTASK 74-21-00-860-003-G00

(3) Do this task: Leading Edge Flaps and Slats Retraction, TASK 27-81-00-860-804.

#### SUBTASK 74-21-00-860-004-G00

(4) Do this task: Leading Edge Flaps and Slats - Deactivation, TASK 27-81-00-040-801.

#### SUBTASK 74-21-00-010-002-G00

(5) Do these tasks in sequence to safely open the left thrust reverser on the applicable engine:



DO THE DEACTIVATION PROCEDURE FOR THE THRUST REVERSER TO PREVENT THE OPERATION OF THE THRUST REVERSER. ACCIDENTAL OPERATION OF THE THRUST REVERSER CAN CAUSE INJURIES TO PERSONS OR DAMAGE TO EQUIPMENT.

- (a) Do this task: Thrust Reverser Deactivation For Ground Maintenance, TASK 78-31-00-040-801-G00.
- (b) Open the applicable left fan cowl panel (TASK 71-11-04-010-801-G00).

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1) Open these access panels:

<u>number</u>	<u>Name/Location</u>
413	Left Fan Cowl, Engine 1
423	Left Fan Cowl, Engine 2



OBEY THE INSTRUCTIONS IN THE PROCEDURE TO OPEN THE THRUST REVERSERS. IF YOU DO NOT OBEY THE INSTRUCTIONS, INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT CAN OCCUR.

- (c) Open the applicable left thrust reverser (TASK 78-31-00-010-801-G00).
  - Open these access panels:

<u>Number</u>	Name/Location
415	Left Thrust Reverser, Engine 1
425	Left Thrust Reverser, Engine 2

#### H. High Tension Ignition Distribution Detailed Inspection

SUBTASK 74-21-00-211-001-G00



MAKE SURE THAT THE IGNITION EXCITERS ARE DE-ENERGIZED FOR A MINIMUM OF FIVE MINUTES BEFORE YOU START WORK ON THE IGNITION SYSTEM. THE IGNITION SYSTEM VOLTAGE IS DANGEROUSLY HIGH. DO NOT TOUCH THE ELECTRICAL CONTACTS. THE IGNITION EXCITERS CAN HAVE AN ELECTRICAL CHARGE EVEN WHEN NOT ENERGIZED. IF YOU DO NOT OBEY THIS STEP, INJURY TO PERSONS CAN OCCUR.

- (1) Examine the ignition lead 1 [6] and ignition lead 2 [7] for these types of damage:
  - (a) Broken or missing wire braid
    - Permitted if the total length of the damaged area is not more than 0.375 in. (9.53 mm).
    - 2) Permitted if there is a maximum of one damaged area for every 1.0 in. (25.4 mm) within 3.0 in. (76.2 mm) of a conduit length of the lead length.
    - 3) Permitted if all damaged areas are more than 0.50 in. (12.7 mm) in length from the attaching hardware or the existing repair.
    - 4) Permitted if you remove all braids that have damage with a diagonal or side wire cutter, STD-8416.
    - 5) All broken or missing braids that are more than the limits are not permitted, replace the ignition lead as follows:
      - a) If you replace ignition lead 1 [6], do these tasks: Left Ignition Lead Removal, TASK 74-21-01-000-801-G00 and Left Ignition Lead Installation, TASK 74-21-01-400-801-G00.
      - b) If you replace ignition lead 2 [7], do these tasks:Right Ignition Lead Removal, TASK 74-21-01-000-802-G00 and Right Ignition Lead Installation, TASK 74-21-01-400-802-G00.
  - (b) Kinks and creases in the ignition lead cables
    - 1) Not permitted.
  - (c) Damage to the ignition lead cable coupling nuts

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- 1) Damage that is more than 50% of one thread or 10% of two or more threads of the ignition lead cable coupling nuts is not permitted.
- 2) Examine the coupling nuts for a missing detent as follows:
  - a) Turn the outer collar of the connector until you hear a click.

NOTE: If you turn the outer collar a full 360° and do not hear a click, then the detent is gone. Missing detent is not permitted.

- (d) Damage to the ignition lead cable elbow assembly and shell
  - Permitted with these limits:
    - a) All scratches are permitted if they are less than 0.0015 in. (0.04 mm) in depth.
    - b) All dents are permitted if they are less than 0.002 in. (0.05 mm) in depth and less than 0.005 in. (0.13 mm) in diameter.
    - c) There are no cracks or creases.
  - 2) All damages to the cable elbow assembly and shell that are more than these limits are not permitted, replace the ignition as follows:
    - a) If you replace ignition lead 1 [6], do these tasks: Left Ignition Lead Removal, TASK 74-21-01-000-801-G00 and Left Ignition Lead Installation, TASK 74-21-01-400-801-G00.
    - If you replace ignition lead 2 [7], do these tasks:Right Ignition Lead Removal, TASK 74-21-01-000-802-G00 and Right Ignition Lead Installation, TASK 74-21-01-400-802-G00.
- (e) Surface Corrosion on the ignition lead
  - Surface corrosion without measurable depth in parent material is permitted if the corrosion can be removed.
    - a) If you see surface corrosion on clamps that attach to the tube of the ignition lead, remove the clamps and do an inspection of the contact area of the tube for corrosion.



ISOPROPYL ALCOHOL IS TOXIC AND FLAMMABLE. USE PERSONAL PROTECTION EQUIPMENT. USE IN A WELL-VENTILATED AREA.

- <1> Use alcohol, B00676 [CP1041], and lint-free cloth, G00834, to remove the surface corrosion.
- <2> Do an inspection of the ignition lead for any corrosion pits. If the surface corrosion cannot be fully removed or if you see pits, replace the ignition lead as follows:
  - <a> If you replace ignition lead 1 [6], do these tasks: Left Ignition Lead Removal, TASK 74-21-01-000-801-G00 and Left Ignition Lead Installation, TASK 74-21-01-400-801-G00.
  - <b> If you replace ignition lead 2 [7], do these tasks: Right Ignition Lead Removal, TASK 74-21-01-000-802-G00 and Right Ignition Lead Installation, TASK 74-21-01-400-802-G00.
- (f) Carbon track marks on the terminal ends of the leads
  - Carbon track marks on the terminal ends of the leads are permitted if you can remove them.

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ISOPROPYL ALCOHOL IS TOXIC AND FLAMMABLE. USE PERSONAL PROTECTION EQUIPMENT. USE IN A WELL-VENTILATED AREA.

- use alcohol, B00676 [CP1041], and lint-free cloth, G00834, to remove the carbon track marks.
- b) Carbon track marks on the terminal ends of the lead that you cannot remove are not permitted, replace the ignition lead cable as follows:
  - <1> If you replace ignition lead 1 [6], do these tasks: Left Ignition Lead Removal, TASK 74-21-01-000-801-G00 and Left Ignition Lead Installation, TASK 74-21-01-400-801-G00.
  - <2> If you replace ignition lead 2 [7], do these tasks:Right Ignition Lead Removal, TASK 74-21-01-000-802-G00 and Right Ignition Lead Installation, TASK 74-21-01-400-802-G00.
- (g) Arcing
  - 1) Not permitted.
- (h) Cracks
  - 1) Cracks in the ignition lead cooling air plenum [5] are not permitted.
- (i) Damage on the CCC flexible air duct [1]
  - 1) Damage on the CCC flexible air duct [1] flexible joint is not permitted.
- (i) Signs of a loose ignition lead 1 [6] or ignition lead 2 [7] at the igniter [3]
  - 1) If the ignition lead cables are loose, do these steps:
    - a) Loosen the hose clamp [4] and remove the cooling air shroud halves [2].
    - b) Tighten the ignition lead coupling nuts to 253.0 in-lb (28.6 N·m) 297.0 in-lb (33.6 N·m).
    - c) Put the cooling air shroud halves [2] into their positions on the igniters [3].
    - d) Move the hose clamp [4] into their positions on the igniters [3].
    - e) Tighten the hose clamp [4] to 32.0 in-lb (3.6 N·m) 38.0 in-lb (4.3 N·m).

#### SUBTASK 74-21-00-211-002-G00

- (2) Examine the igniters [3] as follows:
  - (a) Loosen the hose clamp [4] and remove the cooling air shroud halves [2].
  - (b) If the igniter [3] is loose, tighten the igniter [3] to 262.0 in-lb (29.6 N·m) 308.0 in-lb (34.8 N·m).
  - (c) Look for cracks on the igniters [3].
    - 1) Cracks are not permitted.
  - (d) Look for signs of electrical arcing.
    - 1) Arcing is not permitted.
  - (e) Look for burns or holes on the igniters [3].
    - 1) Burns or holes are not permitted.
  - (f) Put the cooling air shroud halves [2] into their position on the igniters [3].
  - (g) Move the hose clamp [4] into their positions on the igniters [3].
  - (h) Tighten the hose clamp [4] to 32.0 in-lb (3.6 N·m) 38.0 in-lb (4.3 N·m).

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#### I. Put the Airplane Back to Its Usual Condition

SUBTASK 74-21-00-410-002-G00



OBEY THE INSTRUCTIONS IN THE PROCEDURE TO CLOSE THE THRUST REVERSERS. IF YOU DO NOT OBEY THE INSTRUCTIONS, INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT CAN OCCUR.

- (1) Do these tasks in sequence to safely close the left thrust reverser:
  - (a) Do this task: Close the Thrust Reverser (Selection), TASK 78-31-00-010-802-G00.
    - 1) Close these access panels:

<u>Number</u>	Name/Location
415	Left Thrust Reverser, Engine 1
425	Left Thrust Reverser, Engine 2

- (b) Close the applicable left Fan Cowl Panel (TASK 71-11-04-410-801-G00).
  - 1) Close these access panels:

<u>Number</u>	Name/Location
413	Left Fan Cowl, Engine 1
423	Left Fan Cowl, Engine 2

(c) Do this task: Thrust Reverser Activation After Ground Maintenance, TASK 78-31-00-440-801-G00.

#### SUBTASK 74-21-00-860-007-G00

(2) Do this task: Leading Edge Flaps and Slats - Activation, TASK 27-81-00-440-801.

#### SUBTASK 74-21-00-860-008-G00

(3) For the applicable engine, remove the safety tags and close these applicable circuit breakers:

## **CAPT Electrical System Panel, P18-2**

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
Α	1	C00458	<b>ENGINE 1 IGNITION RIGHT</b>
Α	3	C00153	<b>ENGINE 1 IGNITION LEFT</b>

## F/O Electrical System Panel, P6-2

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	4	C00459	<b>ENGINE 2 IGNITION RIGHT</b>
D	6	C00151	<b>ENGINE 2 IGNITION LEFT</b>

## F/O Electrical System Panel, P6-5

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
Ε	1	C04016	<b>ENGINE 1 IGNITION PWR CONT</b>
E	2	C04017	<b>ENGINE 2 IGNITION PWR CONT</b>

#### SUBTASK 74-21-00-860-009-G00

- (4) Do these steps to remove the DO NOT OPERATE tags, STD-858, from the applicable ENGINE START switch and START LEVER switch:
  - (a) On the P5 overhead panel, remove the DO NOT OPERATE tag, STD-858, from the applicable ENGINE START switch.

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## **LEAP-1B ENGINES**



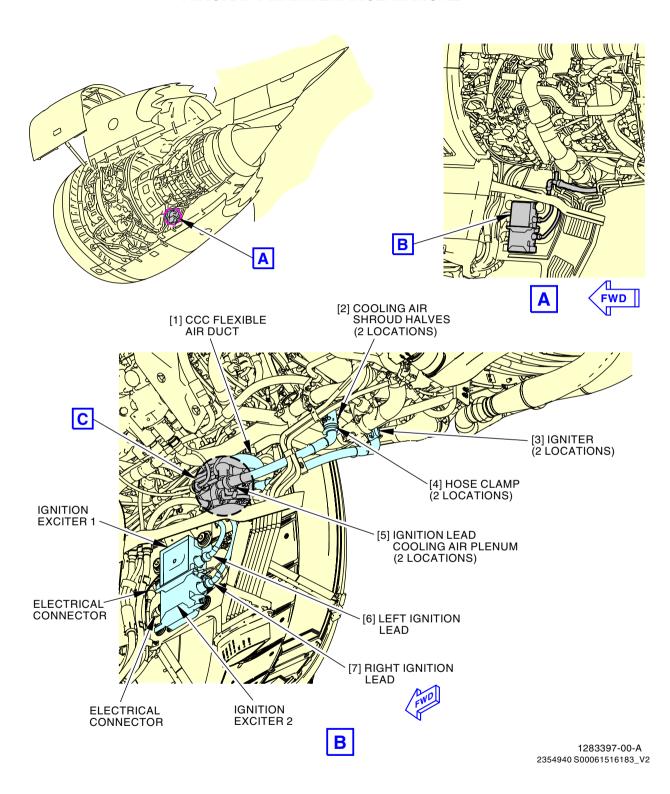
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(b) On the P10 control stand, remove the DO NOT OPERATE tag, STD-858, from the applicable START LEVER switch.

——— END OF TASK ———

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High Tension Ignition Distribution Inspection Figure 601/74-21-00-990-801-G00 (Sheet 1 of 3)

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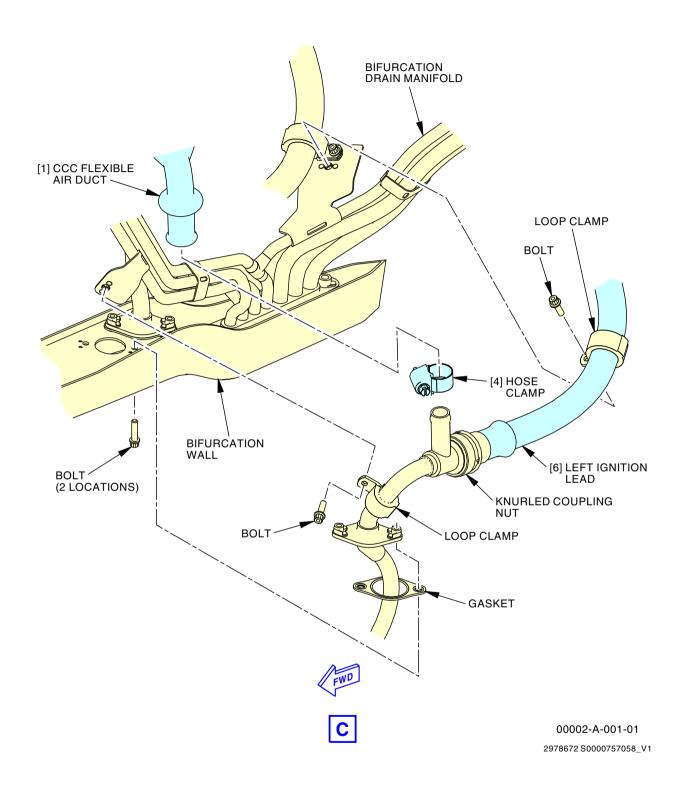
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High Tension Ignition Distribution Inspection Figure 601/74-21-00-990-801-G00 (Sheet 2 of 3)

EFFECTIVITY

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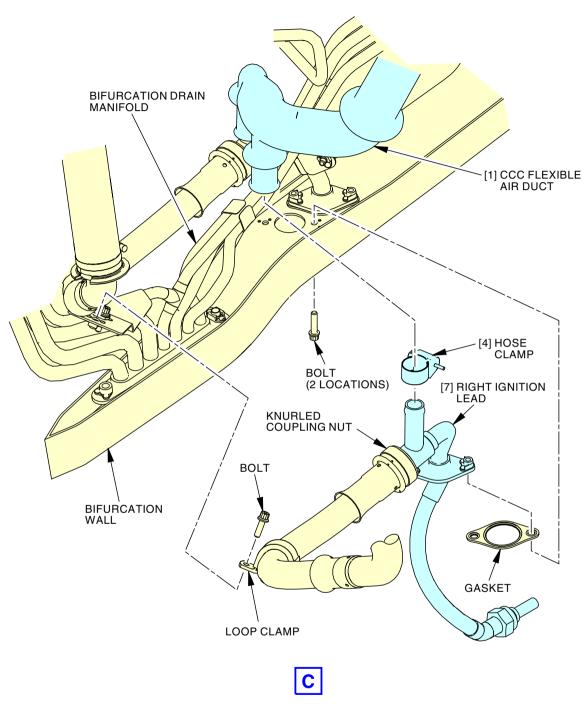
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High Tension Ignition Distribution Inspection Figure 601/74-21-00-990-801-G00 (Sheet 3 of 3)

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### **IGNITION LEAD - REMOVAL/INSTALLATION**

### 1. General

- A. This procedure has these tasks:
  - (1) Left ignition lead removal
  - (2) Left ignition lead installation
  - (3) Right ignition lead removal
  - (4) Right ignition lead installation.

#### TASK 74-21-01-000-801-G00

### 2. Left Ignition Lead Removal

(Figure 401)

#### A. General

- (1) This task gives the instructions to remove the left ignition lead.
- (2) Each engine has two ignition leads. Left ignition lead connects the left ignition exciter and left ignition igniter. Right ignition lead connects the right ignition exciter and right ignition igniter. Left ignition lead is connected to the left ignition igniter located at the 5:30 o'clock position on the combustion case. Right ignition lead is connected to the right ignition igniter located at the 5:00 o'clock position on the combustion case.

#### B. References

Reference	Title
71-11-04-010-801-G00	Open the Fan Cowl Panels (Selection) (P/B 201)
78-31-00-010-801-G00	Open the Thrust Reverser (Selection) (P/B 201)
78-31-00-040-801-G00	Thrust Reverser Deactivation For Ground Maintenance (P/B 201)

## C. Tools/Equipment

Reference	Description	
STD-858	Tag - DO NOT OPERATE	

## D. Location Zones

Zone	Area	
411	Engine 1 - Engine	
421	Fngine 2 - Engine	

## E. Access Panels

Number	Name/Location
413	Left Fan Cowl, Engine 1
414	Right Fan Cowl, Engine 1
415	Left Thrust Reverser, Engine 1
416	Right Thrust Reverser, Engine 1
423	Left Fan Cowl, Engine 2
424	Right Fan Cowl, Engine 2
425	Left Thrust Reverser, Engine 2
426	Right Thrust Reverser, Engine 2

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### F. Prepare for the Removal

#### SUBTASK 74-21-01-860-001-G00

- (1) Do these steps to make sure that the ENGINE START switch and the START LEVER switch are not operated:
  - (a) Make sure that the applicable ENGINE START switch, on the P5 overhead panel, is in the AUTO or OFF position.
    - 1) Put a DO NOT OPERATE tag, STD-858, on the applicable ENGINE START switch.
  - (b) Make sure that the applicable START LEVER switch, on the P10 control stand, is in the CUTOFF position.
    - 1) Put a DO NOT OPERATE tag, STD-858, on the applicable START LEVER switch.

#### SUBTASK 74-21-01-865-001-G00

(2) For the applicable engine, open these circuit breakers and install safety tags:

## **CAPT Electrical System Panel, P18-2**

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
Α	1	C00458	<b>ENGINE 1 IGNITION RIGHT</b>
Α	3	C00153	<b>ENGINE 1 IGNITION LEFT</b>

## F/O Electrical System Panel, P6-2

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	4	C00459	<b>ENGINE 2 IGNITION RIGHT</b>
D	6	C00151	<b>ENGINE 2 IGNITION LEFT</b>

## F/O Electrical System Panel, P6-5

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
Ε	1	C04016	<b>ENGINE 1 IGNITION PWR CONT</b>
E	2	C04017	<b>ENGINE 2 IGNITION PWR CONT</b>

#### SUBTASK 74-21-01-010-001-G00

(3) Do these tasks in sequence to safely open the left and right thrust reversers on the applicable engine:



DO THE DEACTIVATION PROCEDURE FOR THE THRUST REVERSER TO PREVENT THE OPERATION OF THE THRUST REVERSER. ACCIDENTAL OPERATION OF THE THRUST REVERSER CAN CAUSE INJURIES TO PERSONS OR DAMAGE TO EQUIPMENT.

- (a) Do this task: Thrust Reverser Deactivation For Ground Maintenance, TASK 78-31-00-040-801-G00.
- (b) Open the applicable left or right fan cowl panels (TASK 71-11-04-010-801-G00).
  - 1) Open these access panels:

<u>Number</u>	Name/Location
413	Left Fan Cowl, Engine 1
414	Right Fan Cowl, Engine 1
423	Left Fan Cowl, Engine 2
424	Right Fan Cowl, Engine 2

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OBEY THE INSTRUCTIONS IN THE PROCEDURE TO OPEN THE THRUST REVERSERS. IF YOU DO NOT OBEY THE INSTRUCTIONS, INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT CAN OCCUR.

- (c) Open the applicable left or right thrust reversers (TASK 78-31-00-010-801-G00).
  - 1) Open these access panels:

<u>Number</u>	Name/Location
415	Left Thrust Reverser, Engine 1
416	Right Thrust Reverser, Engine 1
425	Left Thrust Reverser, Engine 2
426	Right Thrust Reverser, Engine 2

## G. Left Ignition Lead Removal

SUBTASK 74-21-01-020-001-G00



MAKE SURE THAT THE IGNITION SYSTEM IS OFF FOR FIVE MINUTES BEFORE YOU TOUCH THE COMPONENT. IGNITION VOLTAGE IS HIGH WHICH MAKES IT DANGEROUS. IGNITION VOLTAGE CAN CAUSE INJURIES TO PERSONNEL.



MAKE SURE THAT THE ELECTRICAL CONNECTORS AND RECEPTACLES ARE CLEAN AND CLEAR OF UNWANTED MATERIALS BEFORE YOU DISCONNECT, OR CONNECT THEM. CONTAMINATION OF THE ELECTRICAL CONNECTORS AND RECEPTACLES CAN CAUSE DAMAGE TO EQUIPMENT.



USE TEFLON-JAWED PLIERS TO LOOSEN ELECTRICAL CONNECTORS. DO NOT USE METAL-JAWED PLIERS. DAMAGE TO THE ELECTRICAL CONNECTORS COULD OCCUR.



DO NOT TWIST OR BEND THE IGNITION LEADS. DAMAGE TO THE LEADS CAN OCCUR.



INSTALL CAREFULLY WHEN YOU USE A TOOL TO CONNECT OR DISCONNECT THE LEFT IGNITION LEAD FROM THE LEFT IGNITER PLUG. DAMAGE TO THE BRAZED OIL MANIFOLD CAN OCCUR.

- (1) Remove the left ignition lead [4] as follows:
  - (a) Remove the two bolts [16] that attach the left ignition lead [4] to the bifurcation wall [15].
  - (b) Remove the bolt [14] that attaches the loop clamp [12] and left ignition lead [4] to the bifurcation drain manifold [8].
  - (c) Remove the bolt [10] that attaches the loop clamp [9] and left ignition lead [4] to the bifurcation drain manifold [8].
  - (d) Disconnect the CCC flexible air duct [17] from the left ignition lead [4].
    - 1) Loosen the hose clamp [11].
  - (e) Remove the left ignition lead [4] from the left ignition exciter [1].

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- For the left ignition lead [4], loosen the coupling nut.
- 2) Disconnect the left ignition lead [4] from the left ignition exciter [1].



MAKE SURE TO USE AN AXIAL FORCE WHEN YOU INSTALL OR REMOVE THE IGNITION LEAD. IF YOU USE A LATERAL FORCE. DAMAGE TO THE INSULATOR MATERIAL AT THE **CAUTION** POINT OF THE LEAD CAN OCCUR.

- Make sure that the left ignition lead [4] is pulled straight out with no side loading.
- Remove the hose clamp [19] that attaches the two igniter shroud halves [18] to the left igniter plug [20].
  - 1) Remove the igniter shroud halves [18].
- Disconnect the left ignition lead [4] from the left igniter plug [20]. (g)
- (h) Loosen the knurled coupling nut [22].
- Remove the left ignition lead [4] and gasket [13] from the engine.
  - 1) Discard the gasket [13].
- Remove the silicone washer [21] from the left ignition lead [4] at the igniter input tip.

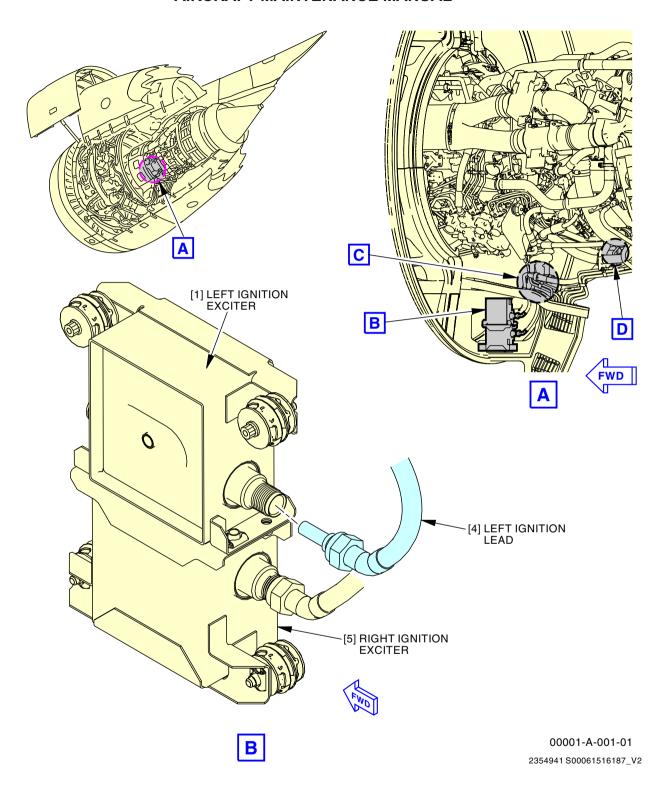
NOTE: Keep the spring assembly with the left ignition lead cable.

- 1) Discard the silicone washer [21].
- Put the protective covers on the left ignition exciter [1], left ignition lead [4], left igniter plug [20], and CCC flexible air duct [17].

— END OF TASK —

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Left Ignition Lead Installation Figure 401/74-21-01-990-801-G00 (Sheet 1 of 4)

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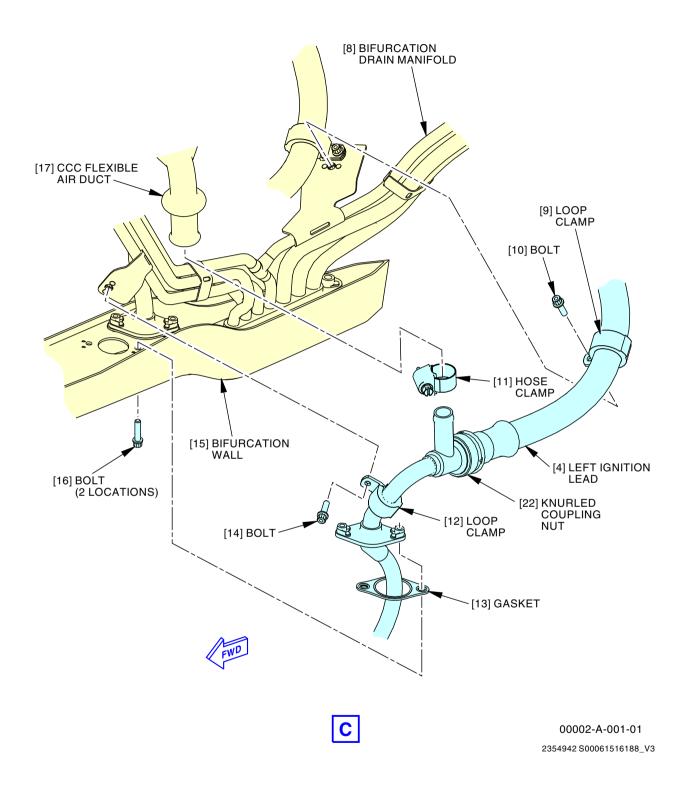
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Left Ignition Lead Installation Figure 401/74-21-01-990-801-G00 (Sheet 2 of 4)

EFFECTIVITY

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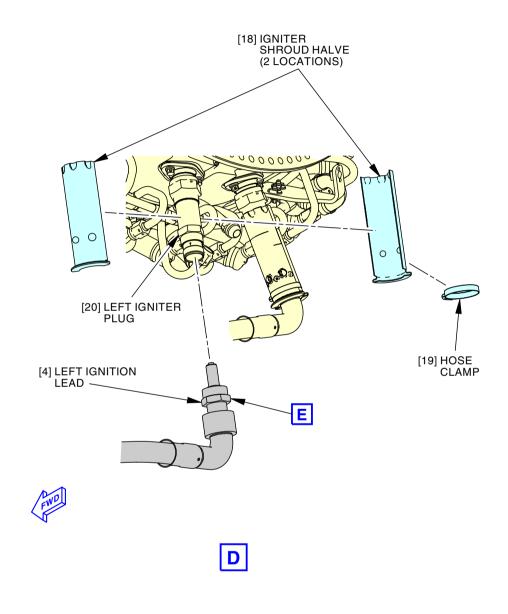
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## Left Ignition Lead Installation Figure 401/74-21-01-990-801-G00 (Sheet 3 of 4)

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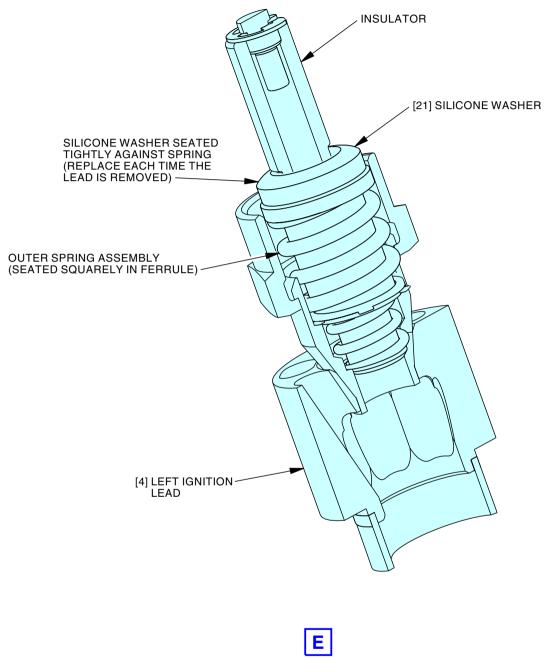
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Left Ignition Lead Installation Figure 401/74-21-01-990-801-G00 (Sheet 4 of 4)

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## TASK 74-21-01-400-801-G00

## 3. Left Ignition Lead Installation

(Figure 401)

#### A. General

(1) This task gives the instructions to install the left ignition lead.

#### B. References

Reference	Title
71-00-00-800-804-G00	Power Plant Test Reference Table (P/B 501)
71-11-04-410-801-G00	Close the Fan Cowl Panels (Selection) (P/B 201)
78-31-00-010-802-G00	Close the Thrust Reverser (Selection) (P/B 201)
78-31-00-440-801-G00	Thrust Reverser Activation After Ground Maintenance (P/B 201)

# C. Tools/Equipment

Reference	Description
STD-664	Pliers - Teflon-jawed (or Equivalent Soft-Jawed)
STD-858	Tag - DO NOT OPERATE

## D. Consumable Materials

Reference	Description	Specification
D00599 [CP2442]	Oil - Engine	
D00601 [CP2101]	Vaseline - Graphite Mineral	

# E. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
4	Left ignition lead	74-11-01-01-120	SIA ALL
13	Gasket	74-11-01-01-130	SIAALL
21	Silicone washer	74-11-01-01-125	SIA ALL

#### F. Location Zones

Zone	Area	
411	Engine 1 - Engine	
421	Engine 2 - Engine	

## G. Access Panels

Number	Name/Location
413	Left Fan Cowl, Engine 1
414	Right Fan Cowl, Engine 1
415	Left Thrust Reverser, Engine 1
416	Right Thrust Reverser, Engine 1
423	Left Fan Cowl, Engine 2
424	Right Fan Cowl, Engine 2
425	Left Thrust Reverser, Engine 2
426	Right Thrust Reverser, Engine 2

SIA ALL

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### H. Left Ignition Lead Installation

SUBTASK 74-21-01-420-001-G00



MAKE SURE THAT THE IGNITION SYSTEM IS OFF FOR FIVE MINUTES BEFORE YOU TOUCH THE COMPONENT. IGNITION VOLTAGE IS HIGH WHICH MAKES IT DANGEROUS. IGNITION VOLTAGE CAN CAUSE INJURIES TO PERSONNEL.



MAKE SURE THAT THE ELECTRICAL CONNECTORS AND RECEPTACLES ARE CLEAN AND CLEAR OF UNWANTED MATERIALS BEFORE YOU DISCONNECT, OR CONNECT THEM. CONTAMINATION OF THE ELECTRICAL CONNECTORS AND RECEPTACLES CAN CAUSE DAMAGE TO EQUIPMENT.



USE PLIERS THAT HAVE TEFLON JAWS TO TIGHTEN THE ELECTRICAL CONNECTORS. DO NOT USE PLIERS THAT HAVE METAL JAWS. METAL JAWS CAN CAUSE DAMAGE TO THE ELECTRICAL CONNECTORS.



DO NOT TWIST OR BEND THE IGNITION LEADS. DAMAGE TO THE LEADS CAN OCCUR.

- (1) Install the left ignition lead [4] as follows:
  - (a) Remove the protective covers from the left ignition lead [4], left ignition exciter [1], left igniter plug [20], and CCC flexible air duct [17].
  - (b) Install a new gasket [13] on the left ignition lead [4].
  - (c) Put a new silicone washer [21] on the insulator at the igniter end of the left ignition lead [4].

NOTE: Install the small end of the silicone washer tightly into the recess in the flange of the outer spring assembly.



DO NOT PUT ACHESON COMPOUND ON THE IGNITER TO IGNITION LEAD THREADS OR THE IGNITION LEAD COUPLING NUT THREADS. DAMAGE TO THE IGNITION LEAD OR IGNITER CAN OCCUR.

- (d) Apply graphite mineral vaseline, D00601 [CP2101], on the threads of the two bolts [16].
- (e) Install the two bolts [16] that attach the left ignition lead [4] and gasket [13] to the bifurcation wall [15].
  - 1) Tighten the bolts [16] to 40.5 in-lb (4.6 N·m) 47.5 in-lb (5.4 N·m).
- (f) Connect the left ignition lead [4] to the left ignition exciter [1] as follows:
  - 1) Make sure that the left ignition lead [4], coupling nut, and left ignition exciter [1] receptacle are clean.
  - 2) Make sure that the cooling plenum on the left ignition lead [4] is in the position to correctly attach the CCC flexible air duct [17] before you tighten the coupling nut on the left ignition lead [4].

SIA ALL





MAKE SURE TO USE AN AXIAL FORCE WHEN YOU INSTALL OR REMOVE THE IGNITION LEAD. IF YOU USE A LATERAL FORCE. DAMAGE TO THE INSULATOR MATERIAL AT THE POINT OF THE LEAD CAN OCCUR.

- Insert the left ignition lead [4] straight into the receptacle of the left ignition exciter [1].
  - Tighten the coupling nut of the left ignition lead [4] by hand.



MAKE SURE THAT YOU INSTALL THE IGNITION LEADS CORRECTLY. INCORRECT TORQUE ON COUPLING NUTS AT THE IGNITION LEAD ENDS CAN CAUSE INTERFERENCE ON **CAUTION** THE AIRCRAFT RADIO EQUIPMENT.

- Tighten the coupling nut of the left ignition lead [4] to 138.0 in-lb (15.6 N·m) -162.0 in-lb (18.3 N·m).
- Connect the CCC flexible air duct [17] to the left ignition lead [4]. (q)
- Install the hose clamp [11] around the CCC flexible air duct [17].
  - Tighten the hose clamp [11] to 32.0 in-lb (3.6 N·m) 38.0 in-lb (4.3 N·m).
- Apply engine oil, D00599 [CP2442], on the bolt [10] and bolt [14].
- Install the bolt [10] that attaches the loop clamp [9] and left ignition lead [4] to the bifurcation drain manifold [8].
  - Tighten the bolt [10] to 32.0 in-lb (3.6 N·m) 38.0 in-lb (4.3 N·m).
- Install the bolt [14] that attaches the loop clamp [12] and left ignition lead [4] to the bifurcation drain manifold [8].
  - Tighten the bolt [14] to 32.0 in-lb (3.6 N·m) 38.0 in-lb (4.3 N·m).
- Make sure that the left ignition lead [4], coupling nut, and left igniter plug [20] receptacle are clean.
- (m) Put the left ignition lead [4] ceramic tip into the left igniter plug [20].



INSTALL CAREFULLY WHEN YOU USE A TOOL TO CONNECT OR DISCONNECT THE LEFT IGNITION LEAD FROM THE LEFT IGNITER PLUG. DAMAGE TO THE BRAZED OIL MANIFOLD CAN OCCUR.

- Connect the left ignition lead [4] to the left igniter plug [20] as follows:
  - Install the left ignition lead [4] to the left igniter plug [20] with the coupling nut.
  - For the left ignition lead [4], tighten the coupling nut to 253.0 in-lb (28.6 N·m) -2) 297.0 in-lb (33.6 N·m).
- Put the hose clamp [19] around the left ignition lead [4] and left igniter plug [20]. (o)
- (p) Put the igniter shroud halves [18] around the left ignition lead [4] and left igniter plug [20].
- (q) Move the hose clamp [19] to the top of the igniter shroud halves [18].
  - Tighten the hose clamp [19] to 32.0 in-lb (3.6 N·m) 38.0 in-lb (4.3 N·m).
- Fully seat the knurled coupling nut [22].
  - Tighten the knurled coupling nut [22] by hand while you wiggle the backshell assembly.

**EFFECTIVITY** SIA ALL



- 2) Use teflon-jawed pliers, STD-664, to tighten the knurled coupling nut [22] until the pliers slips.
- I. Put the Airplane Back to Its Usual Condition

SUBTASK 74-21-01-410-001-G00



OBEY THE INSTRUCTIONS IN THE PROCEDURE TO CLOSE THE THRUST REVERSERS. IF YOU DO NOT OBEY THE INSTRUCTIONS, INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT CAN OCCUR.

- (1) Do these tasks in sequence to safely close the applicable left or right thrust reversers:
  - (a) Do this task: Close the Thrust Reverser (Selection), TASK 78-31-00-010-802-G00.
    - Close these access panels:

<u>Number</u>	Name/Location
415	Left Thrust Reverser, Engine 1
416	Right Thrust Reverser, Engine 1
425	Left Thrust Reverser, Engine 2
426	Right Thrust Reverser, Engine 2

- (b) Do this task: Close the Fan Cowl Panels (Selection), TASK 71-11-04-410-801-G00.
  - 1) Close these access panels:

<u>Number</u>	Name/Location
413	Left Fan Cowl, Engine 1
414	Right Fan Cowl, Engine 1
423	Left Fan Cowl, Engine 2
424	Right Fan Cowl, Engine 2

(c) Do this task: Thrust Reverser Activation After Ground Maintenance, TASK 78-31-00-440-801-G00.

#### SUBTASK 74-21-01-865-002-G00

(2) For the applicable engine, remove the safety tags and close these applicable circuit breakers:

## **CAPT Electrical System Panel, P18-2**

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
Α	1	C00458	<b>ENGINE 1 IGNITION RIGHT</b>
Α	3	C00153	<b>ENGINE 1 IGNITION LEFT</b>

#### F/O Electrical System Panel, P6-2

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	4	C00459	<b>ENGINE 2 IGNITION RIGHT</b>
D	6	C00151	<b>ENGINE 2 IGNITION LEFT</b>

## F/O Electrical System Panel, P6-5

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
Ε	1	C04016	<b>ENGINE 1 IGNITION PWR CONT</b>
Е	2	C04017	<b>ENGINE 2 IGNITION PWR CONT</b>

#### SUBTASK 74-21-01-860-002-G00

(3) Do these steps to remove the DO NOT OPERATE tags, STD-858, from the applicable ENGINE START switch and START LEVER switch:

SIA ALL



- (a) On the P5 overhead panel, remove the DO NOT OPERATE tag, STD-858, from the applicable ENGINE START switch.
- (b) On the P10 control stand, remove the DO NOT OPERATE tag, STD-858, from the applicable START LEVER switch.

## J. Ignition Lead Installation Test

SUBTASK 74-21-01-730-001-G00

(1) Do the test(s) that are given in the Power Plant Test Reference Table (TASK 71-00-00-800-804-G00).

—— END OF TASK ———

#### TASK 74-21-01-000-802-G00

## 4. Right Ignition Lead Removal

(Figure 402)

#### A. General

- (1) This task gives the instructions to remove the right ignition lead.
- (2) Each engine has two ignition leads. Left ignition lead connects the left ignition exciter and left ignition igniter. Right ignition lead connects the right ignition exciter and right ignition igniter. Left ignition lead is connected to the left ignition igniter located at the 5:30 o'clock position on the combustion case. Right ignition lead is connected to the right ignition igniter located at the 5:00 o'clock position on the combustion case.

#### B. References

Reference	Title
71-11-04-010-801-G00	Open the Fan Cowl Panels (Selection) (P/B 201)
78-31-00-010-801-G00	Open the Thrust Reverser (Selection) (P/B 201)
78-31-00-040-801-G00	Thrust Reverser Deactivation For Ground Maintenance (P/B 201)

## C. Tools/Equipment

Reference	Description
STD-858	Tag - DO NOT OPERATE

#### D. Location Zones

Zone	Area
411	Engine 1 - Engine
421	Engine 2 - Engine

#### E. Access Panels

Number	Name/Location
413	Left Fan Cowl, Engine 1
414	Right Fan Cowl, Engine 1
415	Left Thrust Reverser, Engine 1
416	Right Thrust Reverser, Engine 1
423	Left Fan Cowl, Engine 2
424	Right Fan Cowl, Engine 2
425	Left Thrust Reverser, Engine 2
426	Right Thrust Reverser, Engine 2

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### F. Prepare for the Removal

#### SUBTASK 74-21-01-860-003-G00

- (1) Do these steps to make sure that the ENGINE START switch and the START LEVER switch are not operated:
  - (a) Make sure that the applicable ENGINE START switch, on the P5 overhead panel, is in the AUTO or OFF position.
    - 1) Put a DO NOT OPERATE tag, STD-858, on the applicable ENGINE START switch.
  - (b) Make sure that the applicable START LEVER switch, on the P10 control stand, is in the CUTOFF position.
    - 1) Put a DO NOT OPERATE tag, STD-858, on the applicable START LEVER switch.

#### SUBTASK 74-21-01-860-004-G00

(2) For the applicable engine, open these circuit breakers and install safety tags:

## **CAPT Electrical System Panel, P18-2**

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
Α	1	C00458	<b>ENGINE 1 IGNITION RIGHT</b>
Α	3	C00153	<b>ENGINE 1 IGNITION LEFT</b>

## F/O Electrical System Panel, P6-2

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	4	C00459	<b>ENGINE 2 IGNITION RIGHT</b>
D	6	C00151	<b>ENGINE 2 IGNITION LEFT</b>

## F/O Electrical System Panel, P6-5

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
Ε	1	C04016	<b>ENGINE 1 IGNITION PWR CONT</b>
E	2	C04017	<b>ENGINE 2 IGNITION PWR CONT</b>

#### SUBTASK 74-21-01-010-002-G00

(3) Do these tasks in sequence to safely open the left and right thrust reversers on the applicable engine:



DO THE DEACTIVATION PROCEDURE FOR THE THRUST REVERSER TO PREVENT THE OPERATION OF THE THRUST REVERSER. ACCIDENTAL OPERATION OF THE THRUST REVERSER CAN CAUSE INJURIES TO PERSONS OR DAMAGE TO EQUIPMENT.

- (a) Do this task: Thrust Reverser Deactivation For Ground Maintenance, TASK 78-31-00-040-801-G00.
- (b) Open the applicable left or right fan cowl panels (TASK 71-11-04-010-801-G00).
  - 1) Open these access panels:

<u>Number</u>	Name/Location
413	Left Fan Cowl, Engine 1
414	Right Fan Cowl, Engine 1
423	Left Fan Cowl, Engine 2
424	Right Fan Cowl, Engine 2

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OBEY THE INSTRUCTIONS IN THE PROCEDURE TO OPEN THE THRUST REVERSERS. IF YOU DO NOT OBEY THE INSTRUCTIONS, INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT CAN OCCUR.

- (c) Open the applicable left or right thrust reversers (TASK 78-31-00-010-801-G00).
  - 1) Open these access panels:

<u>Number</u>	Name/Location
415	Left Thrust Reverser, Engine 1
416	Right Thrust Reverser, Engine 1
425	Left Thrust Reverser, Engine 2
426	Right Thrust Reverser, Engine 2

## G. Right Ignition Lead Removal

SUBTASK 74-21-01-010-003-G00



MAKE SURE THAT THE IGNITION SYSTEM IS OFF FOR FIVE MINUTES BEFORE YOU TOUCH THE COMPONENT. IGNITION VOLTAGE IS HIGH WHICH MAKES IT DANGEROUS. IGNITION VOLTAGE CAN CAUSE INJURIES TO PERSONNEL.



MAKE SURE THAT THE ELECTRICAL CONNECTORS AND RECEPTACLES ARE CLEAN AND CLEAR OF UNWANTED MATERIALS BEFORE YOU DISCONNECT, OR CONNECT THEM. CONTAMINATION OF THE ELECTRICAL CONNECTORS AND RECEPTACLES CAN CAUSE DAMAGE TO EQUIPMENT.



USE TEFLON-JAWED PLIERS TO LOOSEN ELECTRICAL CONNECTORS. DO NOT USE METAL-JAWED PLIERS. DAMAGE TO THE ELECTRICAL CONNECTORS COULD OCCUR.



DO NOT TWIST OR BEND THE IGNITION LEADS. DAMAGE TO THE LEADS CAN OCCUR.



INSTALL CAREFULLY WHEN YOU USE A TOOL TO CONNECT OR DISCONNECT THE RIGHT IGNITION LEAD FROM THE RIGHT IGNITER PLUG. DAMAGE TO THE BRAZED OIL MANIFOLD CAN OCCUR.

- (1) Remove the right ignition lead [31] as follows (Figure 402):
  - (a) Remove the two bolts [32] that attach the right ignition lead [31] to the bifurcation wall [15].
  - (b) Remove the bolt [35] that attaches the loop clamp [36] and right ignition lead [31] to the bifurcation drain manifold [8].
  - (c) Disconnect the CCC flexible air duct [17] from the right ignition lead [31].
    - 1) Loosen the hose clamp [33].
  - (d) Remove the right ignition lead [31] from the right ignition exciter [5].
    - 1) For the right ignition lead [31], loosen the coupling nut.

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Disconnect the right ignition lead [31] from the right ignition exciter [5].



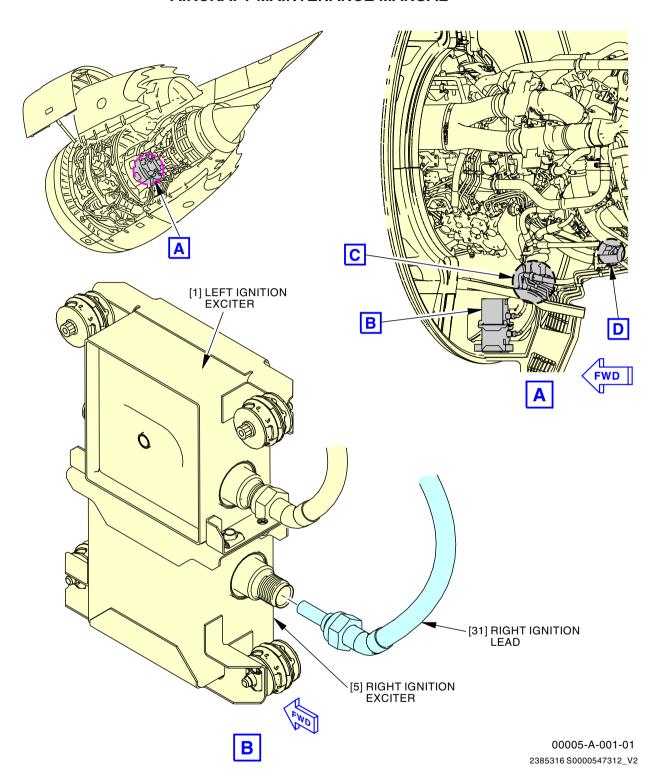
MAKE SURE TO USE AN AXIAL FORCE WHEN YOU INSTALL OR REMOVE THE IGNITION LEAD. IF YOU USE A LATERAL FORCE, DAMAGE TO THE INSULATOR MATERIAL AT THE CAUTION POINT OF THE LEAD CAN OCCUR.

- Make sure that you pull the right ignition lead [31] straight out with no side loading.
- Remove the hose clamp [39] that attaches the two igniter shroud halves [38] to the right igniter plug [37].
  - 1) Remove the igniter shroud halves [38].
- Disconnect the right ignition lead [31] from the right igniter plug [37]. (f)
- (g) Loosen the knurled coupling nut [22].
- (h) Remove the right ignition lead [31] and gasket [34] from the engine.
  - 1) Discard the gasket [34].
- Remove the silicone washer [40] from the right ignition lead [31] at the igniter input tip. NOTE: Keep the spring assembly with the right ignition lead cable.
  - 1) Discard the silicone washer [40].
- Put the protective covers on the right ignition exciter [5], right ignition lead [31], right igniter plug [37], and CCC flexible air duct [17].

— END OF TASK ——

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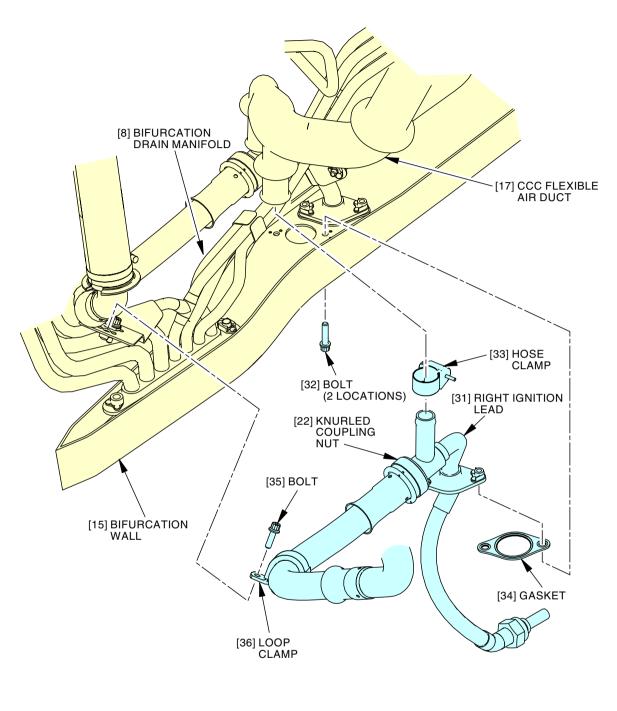
Right Ignition Lead Installation Figure 402/74-21-01-990-802-G00 (Sheet 1 of 4)

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Right Ignition Lead Installation Figure 402/74-21-01-990-802-G00 (Sheet 2 of 4)

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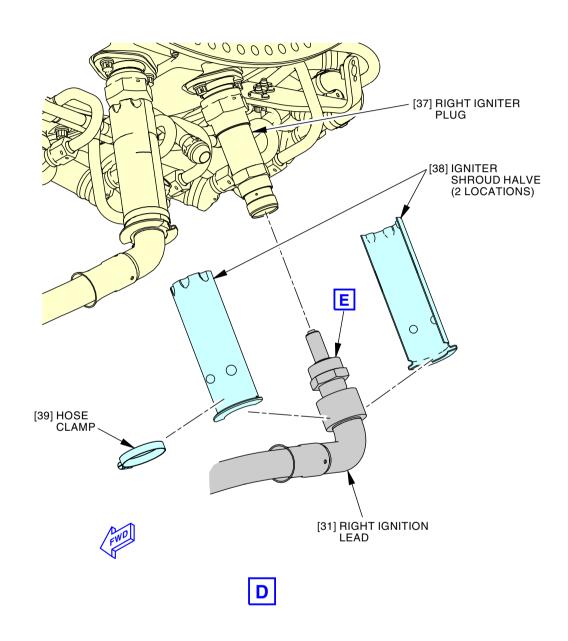
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# Right Ignition Lead Installation Figure 402/74-21-01-990-802-G00 (Sheet 3 of 4)

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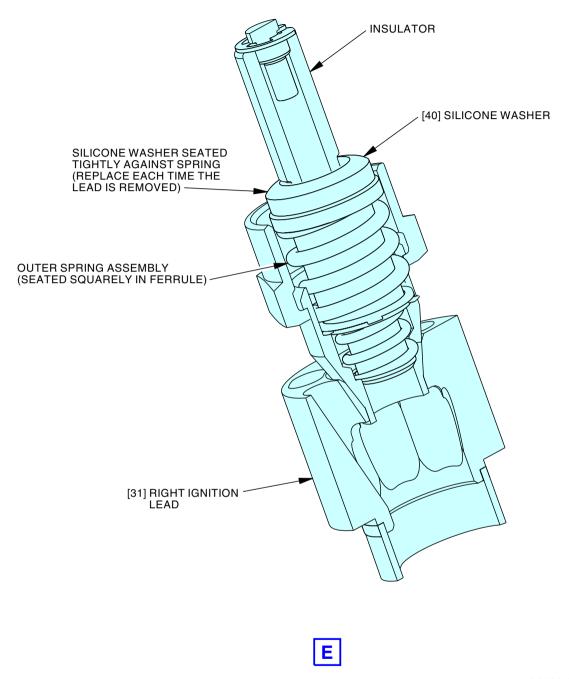
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Right Ignition Lead Installation Figure 402/74-21-01-990-802-G00 (Sheet 4 of 4)

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## TASK 74-21-01-400-802-G00

## 5. Right Ignition Lead Installation

(Figure 402)

#### A. General

(1) This task gives the instructions to install the right ignition lead.

#### B. References

Reference	Title
71-00-00-800-804-G00	Power Plant Test Reference Table (P/B 501)
71-11-04-410-801-G00	Close the Fan Cowl Panels (Selection) (P/B 201)
78-31-00-010-802-G00	Close the Thrust Reverser (Selection) (P/B 201)
78-31-00-440-801-G00	Thrust Reverser Activation After Ground Maintenance (P/B 201)

# C. Tools/Equipment

Reference	Description
STD-664	Pliers - Teflon-jawed (or Equivalent Soft-Jawed)
STD-858	Tag - DO NOT OPERATE

# D. Consumable Materials

Reference	Description	Specification
D00599 [CP2442]	Oil - Engine	
D00601 [CP2101]	Vaseline - Graphite Mineral	

# E. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
31	Right ignition lead	74-11-01-01-110	SIA ALL
		74-11-01-01-120	SIA ALL
34	Gasket	74-11-01-01-130	SIA ALL
40	Silicone washer	74-11-01-01-125	SIA ALL

## F. Location Zones

Zone	Area
411	Engine 1 - Engine
421	Engine 2 - Engine

## G. Access Panels

Number	Name/Location
413	Left Fan Cowl, Engine 1
414	Right Fan Cowl, Engine 1
415	Left Thrust Reverser, Engine 1
416	Right Thrust Reverser, Engine 1
423	Left Fan Cowl, Engine 2
424	Right Fan Cowl, Engine 2
425	Left Thrust Reverser, Engine 2
426	Right Thrust Reverser, Engine 2

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### H. Right Ignition Lead Installation

SUBTASK 74-21-01-410-002-G00



MAKE SURE THAT THE IGNITION SYSTEM IS OFF FOR FIVE MINUTES BEFORE YOU TOUCH THE COMPONENT. IGNITION VOLTAGE IS HIGH WHICH MAKES IT DANGEROUS. IGNITION VOLTAGE CAN CAUSE INJURIES TO PERSONNEL.



MAKE SURE THAT THE ELECTRICAL CONNECTORS AND RECEPTACLES ARE CLEAN AND CLEAR OF UNWANTED MATERIALS BEFORE YOU DISCONNECT, OR CONNECT THEM. CONTAMINATION OF THE ELECTRICAL CONNECTORS AND RECEPTACLES CAN CAUSE DAMAGE TO EQUIPMENT.



USE PLIERS THAT HAVE TEFLON JAWS TO TIGHTEN THE ELECTRICAL CONNECTORS. DO NOT USE PLIERS THAT HAVE METAL JAWS. METAL JAWS CAN CAUSE DAMAGE TO THE ELECTRICAL CONNECTORS.



DO NOT TWIST OR BEND THE IGNITION LEADS. DAMAGE TO THE LEADS CAN OCCUR.

- (1) Install the right ignition lead [31] as follows:
  - (a) Remove the protective covers from the right ignition lead [31], right ignition exciter [5], right igniter plug [37], and CCC flexible air duct [17].
  - (b) Install a new gasket [34] on the right ignition lead [31].
  - (c) Put a new silicone washer [40] on the insulator at the igniter end of the right ignition lead [31].

NOTE: Install the small end of the silicone washer tightly into the recess in the flange of the outer spring assembly.



DO NOT PUT ACHESON COMPOUND ON THE IGNITER TO IGNITION LEAD THREADS OR THE IGNITION LEAD COUPLING NUT THREADS. DAMAGE TO THE IGNITION LEAD OR IGNITER CAN OCCUR.

- (d) Apply graphite mineral vaseline, D00601 [CP2101], on the threads of the two bolts [32].
- (e) Install the two bolts [32] that attach the right ignition lead [31] and gasket [34] to the bifurcation wall [15].
  - 1) Tighten the bolts [32] to 40.5 in-lb (4.6 N·m) 47.5 in-lb (5.4 N·m).
- (f) Connect the right ignition lead [31] to the right ignition exciter [5] as follows:
  - 1) Make sure that the right ignition lead [31], coupling nut, and right ignition exciter [5] receptacle are clean.
  - 2) Make sure that the cooling plenum on the right ignition lead [31] is in the position to correctly attach the CCC flexible air duct [17] before you tighten the coupling nut for the right ignition lead [31].

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MAKE SURE TO USE AN AXIAL FORCE WHEN YOU INSTALL OR REMOVE THE IGNITION LEAD. IF YOU USE A LATERAL FORCE, DAMAGE TO THE INSULATOR MATERIAL AT THE POINT OF THE LEAD CAN OCCUR.

- Insert the right ignition lead [31] straight into the receptacle of the right ignition exciter [5].
  - Tighten the coupling nut of the right ignition lead [31] by hand.



MAKE SURE THAT YOU INSTALL THE IGNITION LEADS CORRECTLY. INCORRECT TORQUE ON COUPLING NUTS AT THE IGNITION LEAD ENDS CAN CAUSE INTERFERENCE ON **CAUTION** THE AIRCRAFT RADIO EQUIPMENT.

- Tighten the coupling nut of the right ignition lead [31] to 138.0 in-lb (15.6 N·m) - 162.0 in-lb (18.3 N·m).
- Connect the CCC flexible air duct [17] to the right ignition lead [31]. (q)
- (h) Install the hose clamp [33] around the CCC flexible air duct [17].
  - Tighten the hose clamp [33] to 32.0 in-lb (3.6 N·m) 38.0 in-lb (4.3 N·m).
- Apply engine oil, D00599 [CP2442], on the bolt [35].
- Install the bolt [35] that attaches the loop clamp [36] and right ignition lead [31] to the bifurcation drain manifold [8].
  - Tighten the bolt [35] to 32.0 in-lb (3.6 N·m) 38.0 in-lb (4.3 N·m).
- Make sure that the right ignition lead [31], coupling nut, and right igniter plug [37] receptacle are clean.
- (I) Put the right ignition lead [31] ceramic tip into the right igniter plug [37].



INSTALL CAREFULLY WHEN YOU USE A TOOL TO CONNECT OR DISCONNECT THE RIGHT IGNITION LEAD FROM THE RIGHT IGNITER PLUG. DAMAGE TO THE BRAZED OIL MANIFOLD CAN OCCUR.

- (m) Connect the right ignition lead [31] to the right igniter plug [37] as follows:
  - Install the right ignition lead [31] to the right igniter plug [37] with the coupling nut.
  - For the right ignition lead [31], tighten the coupling nut to 253.0 in-lb (28.6 N·m) -297.0 in-lb (33.6 N·m).
- (n) Put the hose clamp [39] around the right ignition lead [31] and right igniter plug [37].
- Put the igniter shroud halves [38] around the right ignition lead [31] and right igniter plug [37].
- Move the hose clamp [39] to the top of the igniter shroud halves [38].
  - Tighten the hose clamp [39] to 32.0 in-lb (3.6 N·m) 38.0 in-lb (4.3 N·m).
- (q) Fully seat the knurled coupling nut [22].
  - Tighten the knurled coupling nut [22] by hand while you wiggle the backshell 1) assembly.
  - Use teflon-jawed pliers, STD-664, to tighten the knurled coupling nut [22] until the pliers slips.

**EFFECTIVITY** SIA ALL



#### I. Put the Airplane Back to Its Usual Condition

SUBTASK 74-21-01-410-003-G00



OBEY THE INSTRUCTIONS IN THE PROCEDURE TO CLOSE THE THRUST REVERSERS. IF YOU DO NOT OBEY THE INSTRUCTIONS, INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT CAN OCCUR.

- (1) Do these tasks in sequence to safely close the applicable left or right thrust reversers:
  - (a) Do this task: Close the Thrust Reverser (Selection), TASK 78-31-00-010-802-G00.
    - 1) Close these access panels:

<u>Number</u>	Name/Location
415	Left Thrust Reverser, Engine 1
416	Right Thrust Reverser, Engine 1
425	Left Thrust Reverser, Engine 2
426	Right Thrust Reverser, Engine 2

- (b) Do this task: Close the Fan Cowl Panels (Selection), TASK 71-11-04-410-801-G00.
  - 1) Close these access panels:

<u>Number</u>	Name/Location
413	Left Fan Cowl, Engine 1
414	Right Fan Cowl, Engine 1
423	Left Fan Cowl, Engine 2
424	Right Fan Cowl, Engine 2

(c) Do this task: Thrust Reverser Activation After Ground Maintenance, TASK 78-31-00-440-801-G00.

#### SUBTASK 74-21-01-860-005-G00

(2) For the applicable engine, remove the safety tags and close these applicable circuit breakers:

#### **CAPT Electrical System Panel, P18-2**

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
Α	1	C00458	<b>ENGINE 1 IGNITION RIGHT</b>
Α	3	C00153	<b>ENGINE 1 IGNITION LEFT</b>

## F/O Electrical System Panel, P6-2

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	4	C00459	<b>ENGINE 2 IGNITION RIGHT</b>
D	6	C00151	<b>ENGINE 2 IGNITION LEFT</b>

## F/O Electrical System Panel, P6-5

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
Ε	1	C04016	<b>ENGINE 1 IGNITION PWR CONT</b>
E	2	C04017	<b>ENGINE 2 IGNITION PWR CONT</b>

#### SUBTASK 74-21-01-860-006-G00

- (3) Do these steps to remove the DO NOT OPERATE tags, STD-858, from the applicable ENGINE START switch and START LEVER switch:
  - (a) On the P5 overhead panel, remove the DO NOT OPERATE tag, STD-858, from the applicable ENGINE START switch.

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## **LEAP-1B ENGINES**



# 737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

(b) On the P10 control stand, remove the DO NOT OPERATE tag, STD-858, from the applicable START LEVER switch.

J.	Ignition	Lead	Installation	Test
----	----------	------	--------------	------

SUBTASK 74-21-01-730-002-G00

(1) Do the test(s) that are given in the Power Plant Test Reference Table (TASK 71-00-00-800-804-G00).

\_\_\_\_\_ END OF TASK \_\_\_\_\_

SIA ALL



## **IGNITER PLUG - REMOVAL/INSTALLATION**

### 1. General

- A. This procedure has these tasks:
  - (1) Left Igniter Plug Removal
  - (2) Left Igniter Plug Installation
  - (3) Right Igniter Plug Removal
  - (4) Right Igniter Plug Installation.

#### TASK 74-21-02-000-801-G00

## 2. Left Igniter Plug Removal

(Figure 401)

#### A. General

- (1) This task gives the instructions to remove the left igniter plug.
- (2) The left igniter plug is installed at the 6:00 o'clock position on the combustor case.
- (3) You must open the left and right thrust reverser to get access to the left igniter plug.

#### B. References

Reference	Title
71-11-04-010-801-G00	Open the Fan Cowl Panels (Selection) (P/B 201)
78-31-00-010-801-G00	Open the Thrust Reverser (Selection) (P/B 201)
78-31-00-040-801-G00	Thrust Reverser Deactivation For Ground Maintenance (P/B 201)

## C. Tools/Equipment

Reference	Description
STD-858	Tag - DO NOT OPERATE

## D. Location Zones

Zone	Area
411	Engine 1 - Engine
421	Engine 2 - Engine

#### E. Access Panels

Number	Name/Location
413	Left Fan Cowl, Engine 1
414	Right Fan Cowl, Engine 1
415	Left Thrust Reverser, Engine 1
416	Right Thrust Reverser, Engine 1
423	Left Fan Cowl, Engine 2
424	Right Fan Cowl, Engine 2
425	Left Thrust Reverser, Engine 2
426	Right Thrust Reverser, Engine 2

#### F. Prepare for the Removal

SUBTASK 74-21-02-860-001-G00

(1) Do these steps to make sure that the ENGINE START switch and the START LEVER switch are not operated:

SIA ALL



- (a) Make sure that the applicable ENGINE START switch, on the P5 overhead panel, is in the AUTO or OFF position.
  - 1) Put a DO NOT OPERATE tag, STD-858, on the applicable ENGINE START switch.
- (b) Make sure that the applicable START LEVER switch, on the P10 control stand, is in the CUTOFF position.
  - 1) Put a DO NOT OPERATE tag, STD-858, on the applicable START LEVER switch.

#### SUBTASK 74-21-02-865-001-G00

(2) For the applicable engine, open these circuit breakers and install safety tags:

### **CAPT Electrical System Panel. P18-2**

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
Α	1	C00458	<b>ENGINE 1 IGNITION RIGHT</b>
Α	3	C00153	ENGINE 1 IGNITION LEFT

## F/O Electrical System Panel, P6-2

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	4	C00459	<b>ENGINE 2 IGNITION RIGHT</b>
D	6	C00151	<b>ENGINE 2 IGNITION LEFT</b>

## F/O Electrical System Panel, P6-5

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
Е	1	C04016	<b>ENGINE 1 IGNITION PWR CONT</b>
Ε	2	C04017	<b>ENGINE 2 IGNITION PWR CONT</b>

#### SUBTASK 74-21-02-010-001-G00

(3) Do these tasks in sequence to safely open the left and right thrust reversers on the applicable engine:



DO THE DEACTIVATION PROCEDURE FOR THE THRUST REVERSER TO PREVENT THE OPERATION OF THE THRUST REVERSER. ACCIDENTAL OPERATION OF THE THRUST REVERSER CAN CAUSE INJURIES TO PERSONS OR DAMAGE TO EQUIPMENT.

- (a) Do this task: Thrust Reverser Deactivation For Ground Maintenance, TASK 78-31-00-040-801-G00.
- (b) Open the applicable left or right fan cowl panels (TASK 71-11-04-010-801-G00).
  - Open these access panels:

<u>Number</u>	Name/Location
413	Left Fan Cowl, Engine 1
414	Right Fan Cowl, Engine 1
423	Left Fan Cowl, Engine 2
424	Right Fan Cowl, Engine 2



OBEY THE INSTRUCTIONS IN THE PROCEDURE TO OPEN THE THRUST REVERSERS. IF YOU DO NOT OBEY THE INSTRUCTIONS, INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT CAN OCCUR.

(c) Open the applicable left or right thrust reversers (TASK 78-31-00-010-801-G00).

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1) Open these access panels:

<u>Number</u>	Name/Location
415	Left Thrust Reverser, Engine 1
416	Right Thrust Reverser, Engine 1
425	Left Thrust Reverser, Engine 2
426	Right Thrust Reverser, Engine 2

### G. Left Igniter Plug Removal

SUBTASK 74-21-02-020-001-G00



BE CAREFUL WHEN YOU DO WORK ON THE ENGINE PARTS AFTER YOU STOP THE ENGINE. THE ENGINE PARTS CAN STAY HOT FOR ALMOST 1 HOUR. DO NOT TOUCH HOT PARTS WITHOUT APPLICABLE GLOVES. HOT PARTS CAN CAUSE INJURIES TO PERSONNEL.



MAKE SURE THAT THE IGNITION SYSTEM IS OFF FOR FIVE MINUTES BEFORE YOU TOUCH THE COMPONENT. IGNITION VOLTAGE IS HIGH WHICH MAKES IT DANGEROUS. IGNITION VOLTAGE CAN CAUSE INJURIES TO PERSONNEL.



DO NOT TWIST OR BEND THE IGNITION LEADS. DAMAGE TO THE LEADS CAN OCCUR.

- (1) Remove the igniter cooling air shroud halves [1] as follows:
  - (a) Remove the hose clamp [2] that attaches the igniter cooling air shroud halves [1] to the left ignition lead [3].
  - (b) Remove the igniter cooling air shroud halves [1].

SUBTASK 74-21-02-020-002-G00



DO NOT TWIST OR BEND THE IGNITION LEADS. DAMAGE TO THE LEADS CAN OCCUR.



INSTALL CAREFULLY WHEN YOU USE A TOOL TO CONNECT OR DISCONNECT THE LEFT IGNITION LEAD FROM THE LEFT IGNITER PLUG. DAMAGE TO THE BRAZED OIL MANIFOLD CAN OCCUR.

- (2) Disconnect the left ignition lead [3] from the left igniter plug [4] as follows:
  - (a) Disconnect the left ignition lead [3] from the left igniter plug [4].
    - 1) For the left ignition lead [3], loosen the coupling nut.
  - (b) Remove the silicone washer [6] from the igniter insulator of the left ignition lead [3].
    - 1) Discard the silicone washer [6].
  - (c) Put the protective cover on the left ignition lead [3] connector.
  - (d) Move the left ignition lead [3] away from the left igniter plug [4].
  - (e) Remove the bolt [12] that attaches the loop clamp [13] to the bracket [14].

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#### SUBTASK 74-21-02-020-003-G00

- (3) Remove the left igniter plug [4] as follows:
  - (a) Put protective covers over the fuel manifold adjacent to the left igniter plug [4].
  - (b) Remove the left igniter plug [4] from the igniter plug bushing [5].

NOTE: Do not remove the igniter plug bushing. The gaskets could fall out.

NOTE: If the igniter plug bushing is accidentally removed, record the number of gaskets that were removed.

- 1) Do a check of the igniter plug bushing [5] for looseness.
  - a) If loose, remove the igniter plug bushing [5].

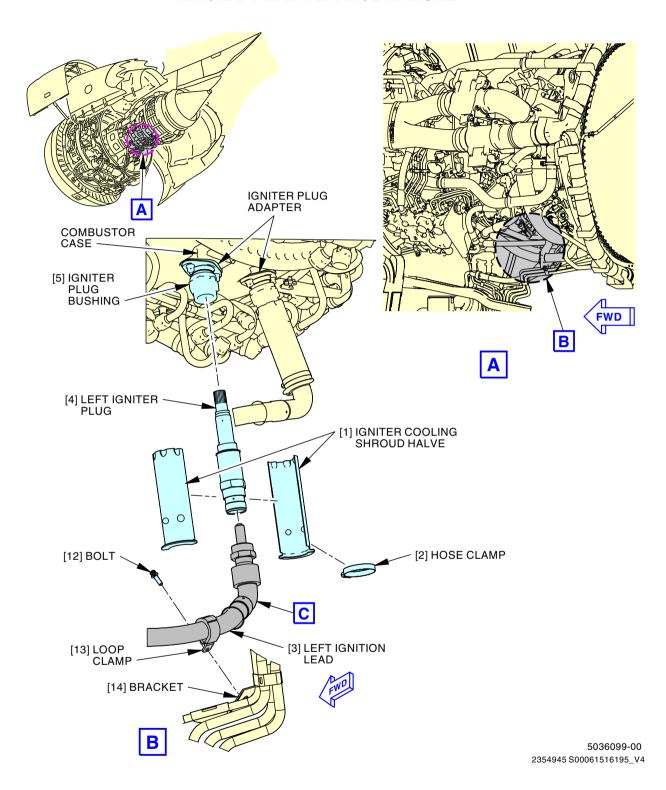
NOTE: Record the number of gaskets that were removed.

- <1> Remove and cut the safety cable, or safety wire, or lockwire.
- (c) Put a protective cover on the open port in the combustor case.
- (d) Remove the protective covers from the fuel manifold.



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Left Igniter Plug Installation Figure 401/74-21-02-990-801-G00 (Sheet 1 of 4)

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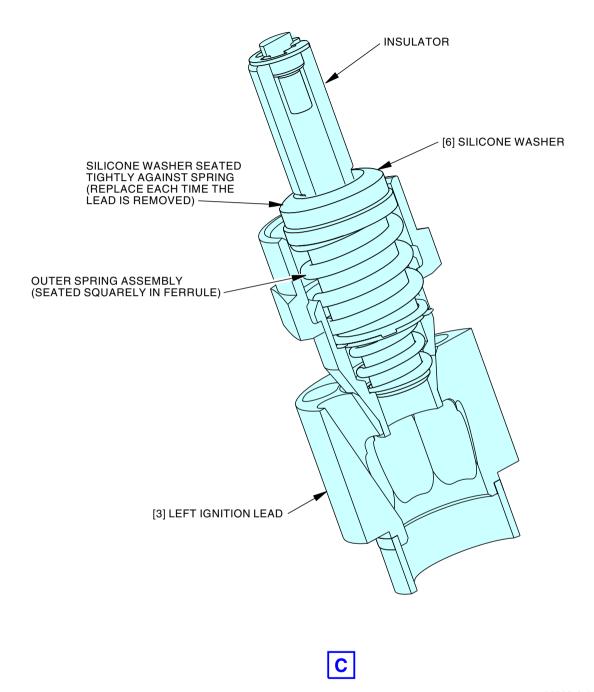
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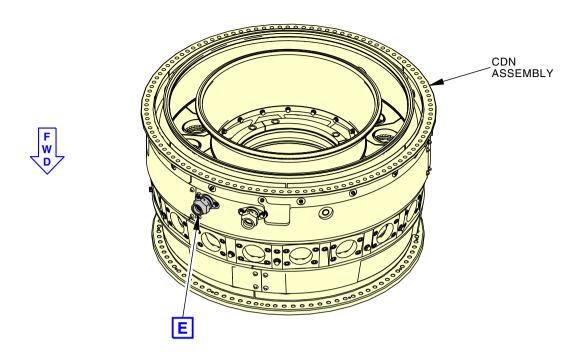
Left Igniter Plug Installation Figure 401/74-21-02-990-801-G00 (Sheet 2 of 4)

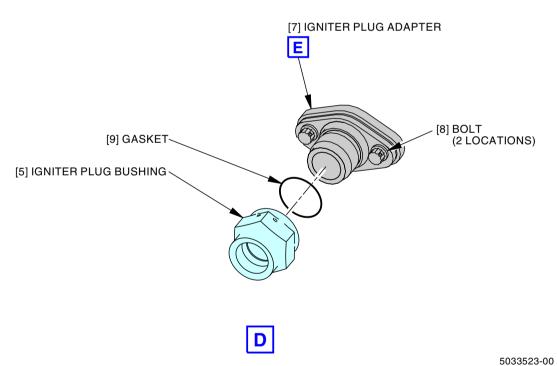
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Left Igniter Plug Installation Figure 401/74-21-02-990-801-G00 (Sheet 3 of 4)

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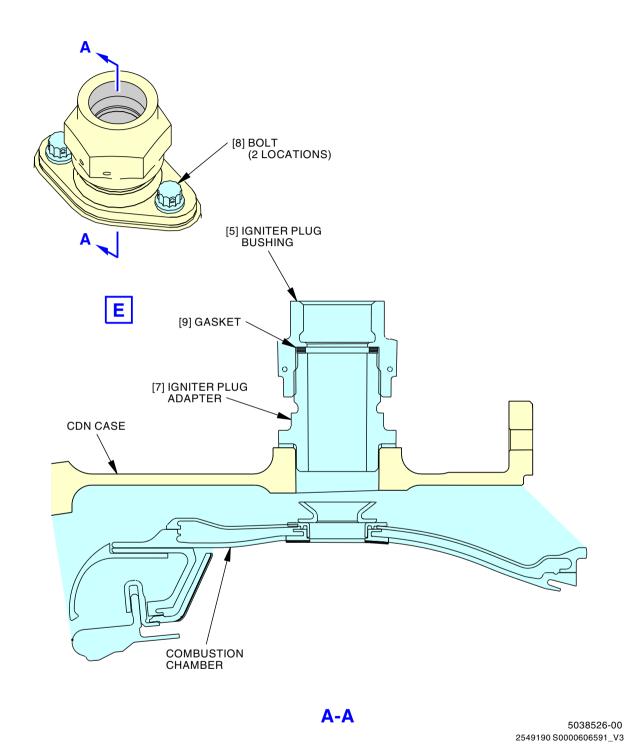
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Left Igniter Plug Installation Figure 401/74-21-02-990-801-G00 (Sheet 4 of 4)

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## TASK 74-21-02-400-801-G00

## 3. Left Igniter Plug Installation

(Figure 401)

#### A. General

- (1) This task gives the instructions to install the left igniter plug.
- (2) You must do the tests that are listed in the power plant test reference table after you install the left igniter plug.

#### B. References

Reference	Title
71-00-00-800-804-G00	Power Plant Test Reference Table (P/B 501)
71-11-04-410-801-G00	Close the Fan Cowl Panels (Selection) (P/B 201)
78-31-00-010-802-G00	Close the Thrust Reverser (Selection) (P/B 201)
78-31-00-440-801-G00	Thrust Reverser Activation After Ground Maintenance (P/B 201)

## C. Tools/Equipment

Reference	Description	
STD-858	Tag - DO NOT OPERATE	

## D. Consumable Materials

Reference	Description	Specification
D00599 [CP2442]	Oil - Engine	
G02345 [CP8001]	Wire - Safety, 0.032 Inch (0.8 mm) Diameter	AMS 5687
G02495 [CP8002]	Wire - Safety, 0.032 Inch (0.8 mm) Diameter	AMS5689
G50065 [CP8006]	Cable, Safety, Stainless Steel, 0.032 inch (0.8 mm) Diameter	M50 TF 9 CL-A

## E. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
4	Left igniter plug	74-21-02-01-010	SIA ALL
6	Silicone washer	74-11-01-01-125	SIAALL
9	Gasket	74-21-02-01-030	SIA ALL

## F. Location Zones

Zone	Area
411	Engine 1 - Engine
421	Engine 2 - Engine

### G. Access Panels

Number	Name/Location
413	Left Fan Cowl, Engine 1
414	Right Fan Cowl, Engine 1
415	Left Thrust Reverser, Engine 1
416	Right Thrust Reverser, Engine 1
423	Left Fan Cowl, Engine 2
424	Right Fan Cowl, Engine 2
425	Left Thrust Reverser, Engine 2
426	Right Thrust Reverser, Engine 2

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## H. Left Igniter Plug Installation

#### SUBTASK 74-21-02-420-007-G00

- (1) If it is necessary, install the igniter plug bushing [5] as follows:
  - (a) Apply engine oil, D00599 [CP2442], to the threads of the igniter plug adapter [7] and igniter plug bushing [5].
  - (b) Install the igniter plug bushing [5] with the same number of gaskets [9] that were originally installed on the igniter plug adapter [7].
  - (c) Tighten by hand the igniter plug bushing [5].
  - (d) Tighten the igniter plug bushing [5] to  $415.0 \pm 33.0$  in-lb  $(46.9 \pm 3.7 \text{ N} \cdot \text{m})$ .
  - (e) Tighten the igniter plug bushing [5] again to 415.0 ±33.0 in-lb (46.9 ±3.7 N·m).
  - (f) Attach the igniter plug bushing [5] to the bolt [8] with a safety cable, G50065 [CP8006], or safety wire, G02345 [CP8001], or safety wire, G02495 [CP8002].

#### SUBTASK 74-21-02-420-001-G00

- (2) Install the left igniter plug [4] as follows:
  - (a) Put protective covers over the fuel manifold adjacent to the igniter port in the combustor case.
  - (b) Remove the protective cover on the combustor case.
  - (c) Apply engine oil, D00599 [CP2442], to the left igniter plug [4] threads that will engage the igniter plug bushing [5].
  - (d) Install the left igniter plug [4] into the igniter plug bushing [5].
    - NOTE: Use a deep well socket to install the igniter plug. Do not use a crows foot.
    - 1) Tighten the left igniter plug [4] to 262.0 in-lb (29.6 N·m) 308.0 in-lb (34.8 N·m).

#### SUBTASK 74-21-02-420-002-G00



MAKE SURE THAT THE IGNITION SYSTEM IS OFF FOR FIVE MINUTES BEFORE YOU TOUCH THE COMPONENT. IGNITION VOLTAGE IS HIGH WHICH MAKES IT DANGEROUS. IGNITION VOLTAGE CAN CAUSE INJURIES TO PERSONNEL.



DO NOT TWIST OR BEND THE IGNITION LEADS. DAMAGE TO THE LEADS CAN OCCUR.



INSTALL CAREFULLY WHEN YOU USE A TOOL TO CONNECT OR DISCONNECT THE LEFT IGNITION LEAD FROM THE LEFT IGNITER PLUG. DAMAGE TO THE BRAZED OIL MANIFOLD CAN OCCUR.

- (3) Install the left ignition lead [3] on the left igniter plug [4] as follows:
  - (a) Remove the protective cover from the left ignition lead [3].
  - (b) Install a new silicone washer [6] over the igniter insulator of the left ignition lead [3].
    - 1) Push the silicone washer [6] on the ignition lead insulator until the small end seats firmly in the recessed flange of the outer spring assembly.

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DO NOT PUT ENGINE OIL ON THE IGNITER TO IGNITION LEAD THREADS OR THE IGNITION LEAD COUPLING NUT THREADS. DAMAGE TO THE IGNITION LEAD OR IGNITER CAN OCCUR.

- (c) Make sure that the ignition lead, coupling nut, and igniter receptacle are clean.
- (d) Put the left ignition lead [3] ceramic tip into the left igniter plug [4].
- (e) Connect the left ignition lead [3] to the left igniter plug [4] with the coupling nut.



ENSURE THAT OUTPUT (HIGH TENSION) LEADS ARE CORRECTLY INSTALLED. INSUFFICIENT TORQUE ON LEAD NUTS AT EXCITER AND IGNITER ENDS CAN CAUSE IGNITION RADIATED NOISE WHICH CAN BE PICKED UP BY AIRCRAFT RADIO EQUIPMENT.

1) For the left ignition lead [3], tighten the coupling nut to 253.0 in-lb (28.6 N·m) - 297.0 in-lb (33.6 N·m).

## SUBTASK 74-21-02-420-003-G00

- (4) Install the igniter cooling air shroud halves [1] as follows:
  - (a) Position the hose clamp [2] around the igniter plug adapter [7].
  - (b) Put the igniter cooling air shroud halves [1] around the left igniter plug [4].
  - (c) Move the hose clamp [2] to its location around the igniter cooling air shroud halves [1].
  - (d) Tighten the hose clamp [2] to 32.0 in-lb (3.62 N·m) 38.0 in-lb (4.29 N·m).
  - (e) Apply engine oil, D00599 [CP2442], to the threads of the bolt [12].
  - (f) Install the bolt [12] that attaches the loop clamp [13] to the bracket [14].
  - (g) Tighten the bolt [12] to 32.0 in-lb (3.62 N·m) 38.0 in-lb (4.29 N·m).

## I. Put the Airplane Back to Its Usual Condition

SUBTASK 74-21-02-410-001-G00



OBEY THE INSTRUCTIONS IN THE PROCEDURE TO CLOSE THE THRUST REVERSERS. IF YOU DO NOT OBEY THE INSTRUCTIONS, INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT CAN OCCUR.

- (1) Do these tasks in sequence to safely close the applicable left or right thrust reversers:
  - (a) Do this task: Close the Thrust Reverser (Selection), TASK 78-31-00-010-802-G00.
    - 1) Close these access panels:

Name/Location
Left Thrust Reverser, Engine 1
Right Thrust Reverser, Engine 1
Left Thrust Reverser, Engine 2
Right Thrust Reverser, Engine 2

- (b) Do this task: Close the Fan Cowl Panels (Selection), TASK 71-11-04-410-801-G00.
  - 1) Close these access panels:

<u>Number</u>	Name/Location
413	Left Fan Cowl, Engine 1
414	Right Fan Cowl, Engine 1
423	Left Fan Cowl, Engine 2

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(Continued)

<u>Number</u>	Name/Location
424	Right Fan Cowl, Engine 2

(c) Do this task: Thrust Reverser Activation After Ground Maintenance, TASK 78-31-00-440-801-G00.

#### SUBTASK 74-21-02-865-002-G00

(2) For the applicable engine, remove the safety tags and close these applicable circuit breakers:

## **CAPT Electrical System Panel, P18-2**

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
Α	1	C00458	<b>ENGINE 1 IGNITION RIGHT</b>
Α	3	C00153	ENGINE 1 IGNITION LEFT

## F/O Electrical System Panel, P6-2

Row	<u>Col</u>	Number	<u>Name</u>
D	4	C00459	<b>ENGINE 2 IGNITION RIGHT</b>
D	6	C00151	<b>ENGINE 2 IGNITION LEFT</b>

## F/O Electrical System Panel, P6-5

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
Е	1	C04016	<b>ENGINE 1 IGNITION PWR CONT</b>
E	2	C04017	<b>ENGINE 2 IGNITION PWR CONT</b>

#### SUBTASK 74-21-02-860-002-G00

- (3) Do these steps to remove the DO NOT OPERATE tags, STD-858, from the applicable ENGINE START switch and START LEVER switch:
  - (a) On the P5 overhead panel, remove the DO NOT OPERATE tag, STD-858, from the applicable ENGINE START switch.
  - (b) On the P10 control stand, remove the DO NOT OPERATE tag, STD-858, from the applicable START LEVER switch.

## J. Left Igniter Plug Installation Test

SUBTASK 74-21-02-730-001-G00

(1) Do the test(s) that are given in the Power Plant Test Reference Table (TASK 71-00-00-800-804-G00).

----- END OF TASK -----

#### TASK 74-21-02-000-802-G00

## 4. Right Igniter Plug Removal

(Figure 402)

#### A. General

- (1) This task gives the instructions to remove the right igniter plug.
- (2) The right igniter plug is installed at the 5:00 o'clock position on the combustor case.
- (3) You must open the right thrust reverser to get access to the right igniter plug.

SIA ALL



## B. References

Reference	Title
71-11-04-010-801-G00	Open the Fan Cowl Panels (Selection) (P/B 201)
78-31-00-010-801-G00	Open the Thrust Reverser (Selection) (P/B 201)
78-31-00-040-801-G00	Thrust Reverser Deactivation For Ground Maintenance (P/B 201)

## C. Tools/Equipment

Reference	Description
STD-858	Tag - DO NOT OPERATE

#### D. Location Zones

Zone	Area
411	Engine 1 - Engine
421	Engine 2 - Engine

#### E. Access Panels

Number	Name/Location
413	Left Fan Cowl, Engine 1
414	Right Fan Cowl, Engine 1
416	Right Thrust Reverser, Engine 1
423	Left Fan Cowl, Engine 2
424	Right Fan Cowl, Engine 2
426	Right Thrust Reverser, Engine 2

## F. Prepare for the Removal

SUBTASK 74-21-02-860-003-G00

- (1) Do these steps to make sure that the ENGINE START switch and the START LEVER switch are not operated:
  - (a) Make sure that the applicable ENGINE START switch, on the P5 overhead panel, is in the AUTO or OFF position.
    - 1) Put a DO NOT OPERATE tag, STD-858, on the applicable ENGINE START switch.
  - (b) Make sure that the applicable START LEVER switch, on the P10 control stand, is in the CUTOFF position.
    - 1) Put a DO NOT OPERATE tag, STD-858, on the applicable START LEVER switch.

### SUBTASK 74-21-02-860-004-G00

(2) For the applicable engine, open these circuit breakers and install safety tags:

## **CAPT Electrical System Panel, P18-2**

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
Α	1	C00458	<b>ENGINE 1 IGNITION RIGHT</b>
Α	3	C00153	<b>ENGINE 1 IGNITION LEFT</b>

## F/O Electrical System Panel, P6-2

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	4	C00459	<b>ENGINE 2 IGNITION RIGHT</b>
D	6	C00151	<b>ENGINE 2 IGNITION LEFT</b>

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## F/O Electrical System Panel, P6-5

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
Ε	1	C04016	<b>ENGINE 1 IGNITION PWR CONT</b>
Ε	2	C04017	<b>ENGINE 2 IGNITION PWR CONT</b>

#### SUBTASK 74-21-02-010-002-G00

(3) Do these tasks in sequence to safely open the right thrust reverser on the applicable engine:



DO THE DEACTIVATION PROCEDURE FOR THE THRUST REVERSER TO PREVENT THE OPERATION OF THE THRUST REVERSER. ACCIDENTAL OPERATION OF THE THRUST REVERSER CAN CAUSE INJURIES TO PERSONS OR DAMAGE TO EQUIPMENT.

(a) Do this task: Thrust Reverser Deactivation For Ground Maintenance, TASK 78-31-00-040-801-G00.



IF FAN COWLS ARE INSTALLED, MAKE SURE THAT LEFT AND RIGHT FAN COWLS ARE IN THE FULL OPEN POSITION. MAKE SURE THAT THE SPRING DOOR OPENING-SYSTEM (SDOS) AND HOLD OPEN RODS (HOR) ARE LOCKED IN THEIR POSITION. IF YOU DO NOT, STRUCTURAL DAMAGE TO THE FAN COWL AND THRUST REVERSER CAN OCCUR.

(b) Open both fan cowl panels (TASK 71-11-04-010-801-G00).

NOTE: Because the center line of the thrust reversers is off 6:00 o'clock position, both fan cowl panels must be opened to prevent damaging the fan cowl panel if either thrust reverser needs to be opened.

1) Open these access panels:

<u>Number</u>	Name/Location
413	Left Fan Cowl, Engine 1
414	Right Fan Cowl, Engine 1
423	Left Fan Cowl, Engine 2
424	Right Fan Cowl, Engine 2



SIA ALL

OBEY THE INSTRUCTIONS IN THE PROCEDURE TO OPEN THE THRUST REVERSERS. IF YOU DO NOT OBEY THE INSTRUCTIONS, INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT CAN OCCUR.

- (c) Open the applicable right thrust reverser (TASK 78-31-00-010-801-G00).
  - 1) Open these access panels:

<u>number</u>	Name/Location
416	Right Thrust Reverser, Engine 1
426	Right Thrust Reverser, Engine 2

Name / Lagation



## G. Right Igniter Plug Removal

SUBTASK 74-21-02-010-003-G00



BE CAREFUL WHEN YOU DO WORK ON THE ENGINE PARTS AFTER YOU STOP THE ENGINE. THE ENGINE PARTS CAN STAY HOT FOR ALMOST 1 HOUR. DO NOT TOUCH HOT PARTS WITHOUT APPLICABLE GLOVES. HOT PARTS CAN CAUSE INJURIES TO PERSONNEL.



MAKE SURE THAT THE IGNITION SYSTEM IS OFF FOR FIVE MINUTES BEFORE YOU TOUCH THE COMPONENT. IGNITION VOLTAGE IS HIGH WHICH MAKES IT DANGEROUS. IGNITION VOLTAGE CAN CAUSE INJURIES TO PERSONNEL.



DO NOT TWIST OR BEND THE IGNITION LEADS. DAMAGE TO THE LEADS CAN OCCUR.

- (1) Remove the igniter cooling air shroud halves [22] as follows:
  - (a) Remove the hose clamp [23] that attaches the igniter cooling air shroud halves [22] to the right ignition lead [24].
  - (b) Remove the igniter cooling air shroud halves [22].

SUBTASK 74-21-02-010-004-G00



DO NOT TWIST OR BEND THE IGNITION LEADS. DAMAGE TO THE LEADS CAN OCCUR.



INSTALL CAREFULLY WHEN YOU USE A TOOL TO CONNECT OR DISCONNECT THE RIGHT IGNITION LEAD FROM THE RIGHT IGNITER PLUG. DAMAGE TO THE BRAZED OIL MANIFOLD CAN OCCUR.

- (2) Disconnect the right ignition lead [24] from the right igniter plug [25] as follows:
  - (a) Disconnect the right ignition lead [24] from the right igniter plug [25].
    - 1) For the right ignition lead [24], loosen the coupling nut.
  - (b) Remove the silicone washer [26] from the igniter insulator of the right ignition lead [24].
    - 1) Discard the silicone washer [26].
  - (c) Put a protection cover on the right ignition lead [24] connector.
  - (d) Move the right ignition lead [24] away from the right igniter plug [25].

#### SUBTASK 74-21-02-010-005-G00

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- (3) Remove the right igniter plug [25] as follows:
  - (a) Put protective covers over the fuel manifold adjacent to the right igniter plug [25].
  - (b) Remove the right igniter plug [25] from the igniter plug bushing [21].
    - NOTE: Do not remove the igniter plug bushing. The gaskets could fall out.
    - <u>NOTE</u>: If the igniter plug bushing is accidentally removed, record the number of gaskets that were removed.
    - 1) Do a check of the igniter plug bushing [21] for looseness.

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## **LEAP-1B ENGINES**



# 737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

a) If loose, remove the igniter plug bushing [21].

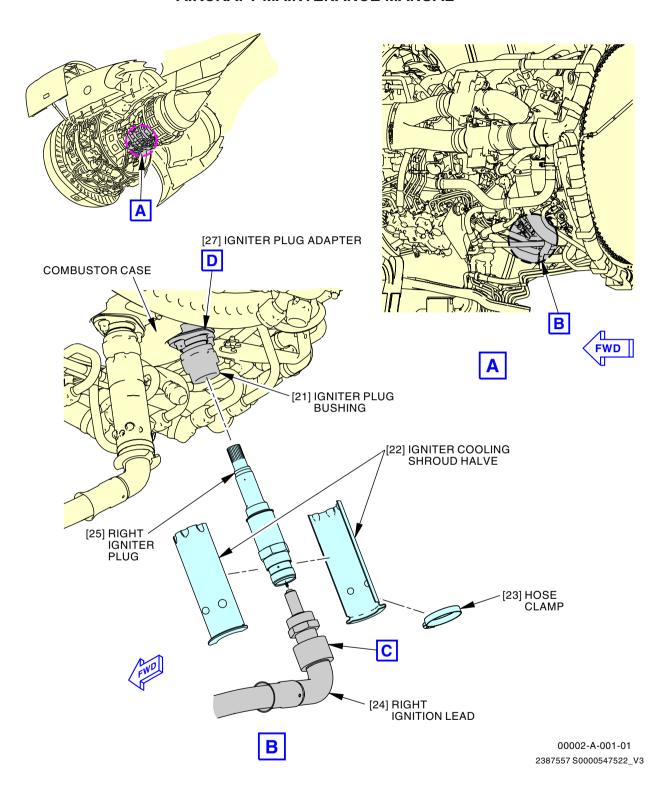
NOTE: Record the number of gaskets that were removed.

- <1> Remove and cut the safety cable, or safety wire, or lockwire between the igniter plug bushing [21] and bolt [29].
- (c) Put a protective cover on the open port in the combustor case.
- (d) Remove the protective covers from the fuel manifold.

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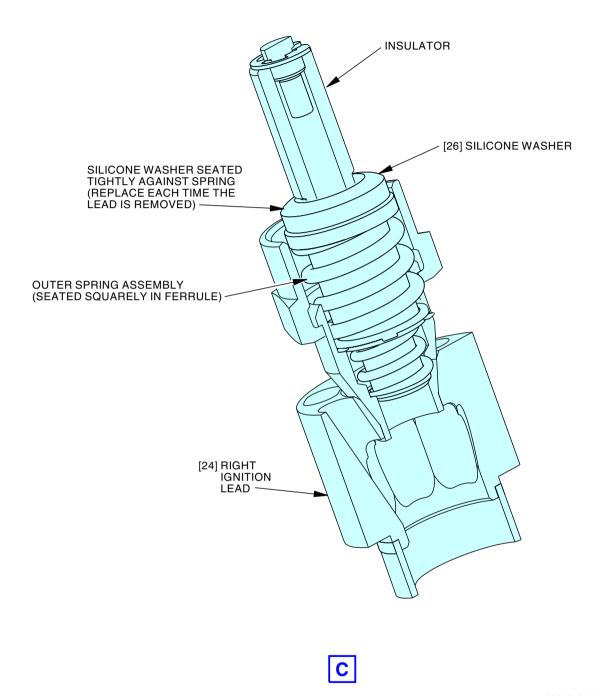
Right Igniter Plug Installation Figure 402/74-21-02-990-803-G00 (Sheet 1 of 4)

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ECCN 9E991 BOEING PROPRIETARY - See title page for details



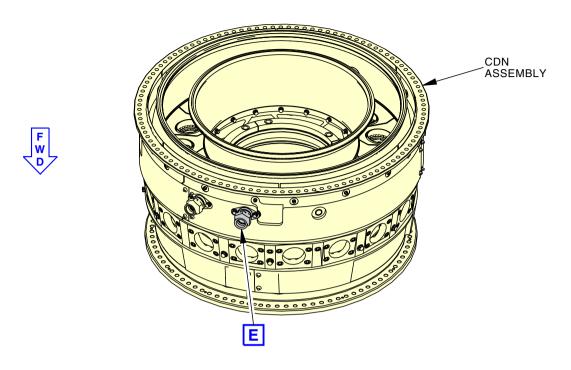


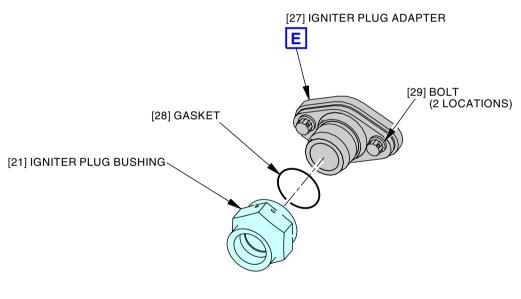
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Right Igniter Plug Installation Figure 402/74-21-02-990-803-G00 (Sheet 2 of 4)

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Right Igniter Plug Installation Figure 402/74-21-02-990-803-G00 (Sheet 3 of 4)

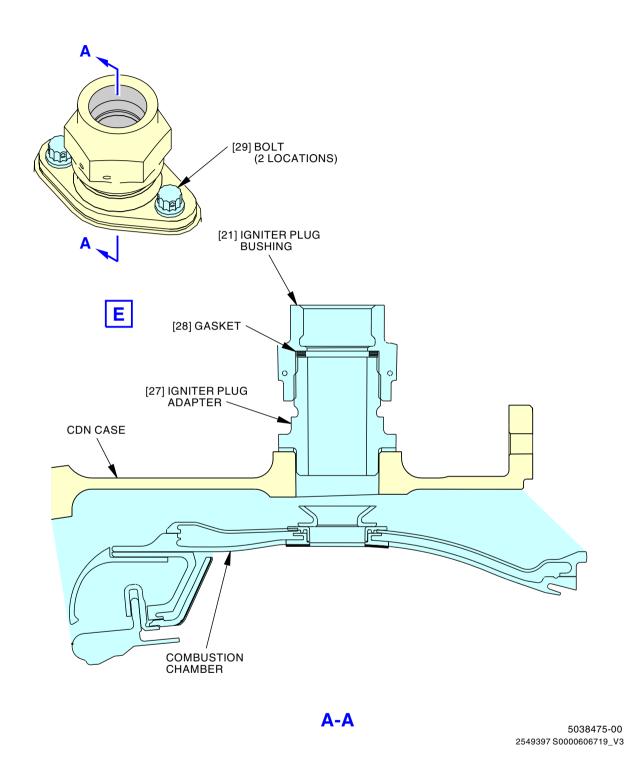
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Right Igniter Plug Installation Figure 402/74-21-02-990-803-G00 (Sheet 4 of 4)

EFFECTIVITY

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## TASK 74-21-02-400-802-G00

## 5. Right Igniter Plug Installation

(Figure 402)

#### A. General

- (1) This task gives the instructions to install the right igniter plug.
- (2) You must do the tests that are listed in the power plant test reference table after you install the right igniter plug.

#### B. References

Reference	Title
71-00-00-800-804-G00	Power Plant Test Reference Table (P/B 501)
71-11-04-410-801-G00	Close the Fan Cowl Panels (Selection) (P/B 201)
78-31-00-010-802-G00	Close the Thrust Reverser (Selection) (P/B 201)
78-31-00-440-801-G00	Thrust Reverser Activation After Ground Maintenance (P/B 201)

## C. Tools/Equipment

Reference	Description	
STD-858	Tag - DO NOT OPERATE	

## D. Consumable Materials

Reference	Description	Specification
D00599 [CP2442]	Oil - Engine	
G02345 [CP8001]	Wire - Safety, 0.032 Inch (0.8 mm) Diameter	AMS 5687
G02495 [CP8002]	Wire - Safety, 0.032 Inch (0.8 mm) Diameter	AMS5689
G50065 [CP8006]	Cable, Safety, Stainless Steel, 0.032 inch (0.8 mm) Diameter	M50 TF 9 CL-A

## E. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
25	Right igniter plug	74-21-02-01-010	SIA ALL
26	Silicone washer	74-11-01-01-125	SIA ALL
28	Gasket	74-21-02-01-030	SIA ALL

## F. Location Zones

Zone	Area
411	Engine 1 - Engine
421	Engine 2 - Engine

### G. Access Panels

Name/Location
Left Fan Cowl, Engine 1
Right Fan Cowl, Engine 1
Right Thrust Reverser, Engine 1
Left Fan Cowl, Engine 2
Right Fan Cowl, Engine 2
Right Thrust Reverser, Engine 2

## H. Right Igniter Plug Installation

SUBTASK 74-21-02-420-006-G00

(1) If it is necessary, install the igniter plug bushing [21] as follows:

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- (a) Apply engine oil, D00599 [CP2442], to the threads of the igniter plug adapter [27] and igniter plug bushing [21].
- (b) Install the igniter plug bushing [21] with the same number of gaskets [28] that were originally installed on the igniter plug adapter [27].
- (c) Tighten by hand the igniter plug bushing [21].
- (d) Tighten the igniter plug bushing [21] to  $415.0 \pm 33.0$  in-lb  $(46.9 \pm 3.7 \text{ N} \cdot \text{m})$ .
- (e) Tighten the igniter plug bushing [21] again to 415.0 ±33.0 in-lb (46.9 ±3.7 N·m).
- (f) Attach the igniter plug bushing [21] to the bolt [29] with safety cable, G50065 [CP8006], or safety wire, G02345 [CP8001], or safety wire, G02495 [CP8002].

#### SUBTASK 74-21-02-410-002-G00

- (2) Install the right igniter plug [25] as follows:
  - (a) Put protective covers over the fuel manifold adjacent to the igniter port in the combustor case.
  - (b) Remove the protective cover on the combustor case.
  - (c) Apply engine oil, D00599 [CP2442], to the right igniter plug [25] threads that will engage the igniter plug bushing [21].
  - (d) Install the right igniter plug [25] into the igniter plug bushing [21].
    - NOTE: Use a deep well socket to install the igniter plug. Do not use a crows foot.
    - 1) Tighten the right igniter plug [25] to 262.0 in-lb (29.6 N·m) 308.0 in-lb (34.8 N·m).

#### SUBTASK 74-21-02-410-003-G00



MAKE SURE THAT THE IGNITION SYSTEM IS OFF FOR FIVE MINUTES BEFORE YOU TOUCH THE COMPONENT. IGNITION VOLTAGE IS HIGH WHICH MAKES IT DANGEROUS. IGNITION VOLTAGE CAN CAUSE INJURIES TO PERSONNEL.



DO NOT TWIST OR BEND THE IGNITION LEADS. DAMAGE TO THE LEADS CAN OCCUR.



INSTALL CAREFULLY WHEN YOU USE A TOOL TO CONNECT OR DISCONNECT THE RIGHT IGNITION LEAD FROM THE RIGHT IGNITER PLUG. DAMAGE TO THE BRAZED OIL MANIFOLD CAN OCCUR.

- (3) Install the right ignition lead [24] on the right igniter plug [25] as follows:
  - (a) Remove the protective cover from the right ignition lead [24].
  - (b) Install a new silicone washer [26] over the igniter insulator of the right ignition lead [24].
    - 1) Push the silicone washer [26] on the ignition lead insulator until the small end seats firmly in the recessed flange of the outer spring assembly.



DO NOT PUT ENGINE OIL ON THE IGNITER TO IGNITION LEAD THREADS OR THE IGNITION LEAD COUPLING NUT THREADS. DAMAGE TO THE IGNITION LEAD OR IGNITER CAN OCCUR.

(c) Make sure that the ignition lead, coupling nut, and igniter receptacle are clean.

SIA ALL



- (d) Put the right ignition lead [24] ceramic tip into the right igniter plug [25].
- (e) Connect the right ignition lead [24] to the right igniter plug [25] with the coupling nut.



ENSURE THAT OUTPUT (HIGH TENSION) LEADS ARE CORRECTLY INSTALLED. INSUFFICIENT TORQUE ON LEAD NUTS AT EXCITER AND IGNITER ENDS CAN CAUSE IGNITION RADIATED NOISE WHICH CAN BE PICKED UP BY AIRCRAFT RADIO EQUIPMENT.

1) For the right ignition lead [24], tighten the coupling nut to 253.0 in-lb (28.6 N·m) - 297.0 in-lb (33.6 N·m).

#### SUBTASK 74-21-02-410-004-G00

- (4) Install the igniter cooling air shroud halves [22] as follows:
  - (a) Position the hose clamp [23] around the igniter plug adapter [27].
  - (b) Put the igniter cooling air shroud halves [22] around the right igniter plug [25].
  - (c) Move the hose clamp [23] to its position around the igniter cooling air shroud halves [22].
  - (d) Tighten the hose clamp [23] to 32.0 in-lb (3.62 N⋅m) 38.0 in-lb (4.29 N⋅m).
- I. Put the Airplane Back to Its Usual Condition

SUBTASK 74-21-02-410-005-G00



OBEY THE INSTRUCTIONS IN THE PROCEDURE TO CLOSE THE THRUST REVERSERS. IF YOU DO NOT OBEY THE INSTRUCTIONS, INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT CAN OCCUR.

- (1) Do these tasks in sequence to safely close the right thrust reverser:
  - (a) Do this task: Close the Thrust Reverser (Selection), TASK 78-31-00-010-802-G00.
    - 1) Close these access panels:

<u>Number</u>	Name/Location
416	Right Thrust Reverser, Engine 1
426	Right Thrust Reverser, Engine 2

- (b) Close the fan cowl panels (TASK 71-11-04-410-801-G00).
  - 1) Close these access panels:

<u>Number</u>	Name/Location
413	Left Fan Cowl, Engine 1
414	Right Fan Cowl, Engine 1
423	Left Fan Cowl, Engine 2
424	Right Fan Cowl, Engine 2

(c) Do this task: Thrust Reverser Activation After Ground Maintenance, TASK 78-31-00-440-801-G00.

#### SUBTASK 74-21-02-860-005-G00

(2) For the applicable engine, remove the safety tags and close these applicable circuit breakers:

## **CAPT Electrical System Panel, P18-2**

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
Α	1	C00458	<b>ENGINE 1 IGNITION RIGHT</b>
Α	3	C00153	<b>ENGINE 1 IGNITION LEFT</b>

SIA ALL



## F/O Electrical System Panel, P6-2

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	4	C00459	<b>ENGINE 2 IGNITION RIGHT</b>
D	6	C00151	<b>ENGINE 2 IGNITION LEFT</b>

## F/O Electrical System Panel, P6-5

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
Ε	1	C04016	<b>ENGINE 1 IGNITION PWR CONT</b>
Е	2	C04017	<b>ENGINE 2 IGNITION PWR CONT</b>

#### SUBTASK 74-21-02-860-006-G00

- (3) Do these steps to remove the DO NOT OPERATE tags, STD-858, from the applicable ENGINE START switch and START LEVER switch:
  - (a) On the P5 overhead panel, remove the DO NOT OPERATE tag, STD-858, from the applicable ENGINE START switch.
  - (b) On the P10 control stand, remove the DO NOT OPERATE tag, STD-858, from the applicable START LEVER switch.

# J. Right Igniter Plug Installation Test

SUBTASK 74-21-02-730-002-G00

(1) Do the test(s) that are given in the Power Plant Test Reference Table (TASK 71-00-00-800-804-G00).

----- END OF TASK -----

SIA ALL 74-21-02



## **IGNITER - INSPECTION/CHECK**

## 1. General

- A. This procedure has one task:
  - (1) Igniter inspection.

## TASK 74-21-02-220-801-G00

## 2. Igniter Inspection

(Figure 601)

## A. General

- (1) This task provides the instructions on how to do the detailed inspection of the engine igniter plugs.
- (2) There are two igniter plug on each engine.
- (3) The inspection task for the two igniter plugs is the same.

## B. References

Reference	Title
27-81-00-040-801	Leading Edge Flaps and Slats - Deactivation (P/B 201)
27-81-00-440-801	Leading Edge Flaps and Slats - Activation (P/B 201)
27-81-00-860-804	Leading Edge Flaps and Slats Retraction (P/B 201)
71-11-04-010-801-G00	Open the Fan Cowl Panels (Selection) (P/B 201)
71-11-04-410-801-G00	Close the Fan Cowl Panels (Selection) (P/B 201)
74-21-02-000-801-G00	Left Igniter Plug Removal (P/B 401)
74-21-02-000-802-G00	Right Igniter Plug Removal (P/B 401)
74-21-02-400-801-G00	Left Igniter Plug Installation (P/B 401)
74-21-02-400-802-G00	Right Igniter Plug Installation (P/B 401)
78-31-00-010-801-G00	Open the Thrust Reverser (Selection) (P/B 201)
78-31-00-010-802-G00	Close the Thrust Reverser (Selection) (P/B 201)
78-31-00-040-801-G00	Thrust Reverser Deactivation For Ground Maintenance (P/B 201)
78-31-00-440-801-G00	Thrust Reverser Activation After Ground Maintenance (P/B 201)

## C. Tools/Equipment

Reference	Description
STD-858	Tag - DO NOT OPERATE
STD-1096	Micrometer - Depth, 0-1 inch, Readable to 1/1000 inch
STD-1303	Caliper - Dial

## D. Consumable Materials

Reference	Description	Specification
B00130	Alcohol - Isopropyl	TT-I-735
G00034	Cotton Wiper - Process Cleaning Absorbent Wiper (Cheesecloth, Gauze)	AMS3819 Class 1 Grade A or B Form 1 (Supersede BMS15-5 CL A)
G01659	Swab - Cotton Or Rayon, (Disposable)	

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#### E. Location Zones

Zone	Area
411	Engine 1 - Engine
421	Engine 2 - Engine

## F. Access Panels

Number	Name/Location
413	Left Fan Cowl, Engine 1
414	Right Fan Cowl, Engine 1
415	Left Thrust Reverser, Engine 1
416	Right Thrust Reverser, Engine 1
423	Left Fan Cowl, Engine 2
424	Right Fan Cowl, Engine 2
425	Left Thrust Reverser, Engine 2
426	Right Thrust Reverser, Engine 2

### G. Prepare for the Inspection

#### SUBTASK 74-21-02-860-007-G00

- (1) Do these steps to make sure that the ENGINE START switch and the START LEVER switch are not operated:
  - (a) Make sure that the applicable ENGINE START switch, on the P5 overhead panel, is in the AUTO or OFF position.
    - 1) Put a DO NOT OPERATE tag, STD-858, on the applicable ENGINE START switch.
  - (b) Make sure that the applicable START LEVER switch, on the P10 control stand, is in the CUTOFF position.
    - 1) Put a DO NOT OPERATE tag, STD-858, on the applicable START LEVER switch.

#### SUBTASK 74-21-02-860-008-G00

(2) For the applicable engine, open these circuit breakers and install safety tags:

### **CAPT Electrical System Panel, P18-2**

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
Α	1	C00458	<b>ENGINE 1 IGNITION RIGHT</b>
Α	3	C00153	<b>ENGINE 1 IGNITION LEFT</b>

## F/O Electrical System Panel, P6-2

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	4	C00459	<b>ENGINE 2 IGNITION RIGHT</b>
D	6	C00151	ENGINE 2 IGNITION LEFT

## F/O Electrical System Panel, P6-5

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
Е	1	C04016	<b>ENGINE 1 IGNITION PWR CONT</b>
Ε	2	C04017	<b>ENGINE 2 IGNITION PWR CONT</b>

## SUBTASK 74-21-02-860-009-G00

(3) Do this task: Leading Edge Flaps and Slats Retraction, TASK 27-81-00-860-804.

## SUBTASK 74-21-02-860-010-G00

(4) Do this task: Leading Edge Flaps and Slats - Deactivation, TASK 27-81-00-040-801.

SIA ALL



#### SUBTASK 74-21-02-860-011-G00

(5) Do these tasks in sequence to safely open the left and right thrust reversers on the applicable engine:



DO THE DEACTIVATION PROCEDURE FOR THE THRUST REVERSER TO PREVENT THE OPERATION OF THE THRUST REVERSER. ACCIDENTAL OPERATION OF THE THRUST REVERSER CAN CAUSE INJURIES TO PERSONS OR DAMAGE TO EQUIPMENT.

- (a) Do this task: Thrust Reverser Deactivation For Ground Maintenance, TASK 78-31-00-040-801-G00.
- (b) Open the applicable left or right fan cowl panels (TASK 71-11-04-010-801-G00).
  - 1) Open these access panels:

<u>Number</u>	Name/Location
413	Left Fan Cowl, Engine 1
414	Right Fan Cowl, Engine 1
423	Left Fan Cowl, Engine 2
424	Right Fan Cowl, Engine 2



OBEY THE INSTRUCTIONS IN THE PROCEDURE TO OPEN THE THRUST REVERSERS. IF YOU DO NOT OBEY THE INSTRUCTIONS, INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT CAN OCCUR.

- (c) Open the applicable left or right thrust reversers (TASK 78-31-00-010-801-G00).
  - Open these access panels:

<u>Number</u>	Name/Location
415	Left Thrust Reverser, Engine 1
416	Right Thrust Reverser, Engine 1
425	Left Thrust Reverser, Engine 2
426	Right Thrust Reverser, Engine 2

#### SUBTASK 74-21-02-010-006-G00

(6) Remove the igniter plug 1 and/or igniter plug 2 (Left Igniter Plug Removal, TASK 74-21-02-000-801-G00 and/or Right Igniter Plug Removal, TASK 74-21-02-000-802-G00).

## H. Igniter Inspection

#### SUBTASK 74-21-02-212-001-G00

- (1) Examine the recess in the igniter input terminal for these types of damage:
  - (a) Look for cracks, scratches, missing pieces, or signs of burning in the ceramic insulator.
    - 1) Make sure that the ceramic insulator is not loose.
    - 2) Small chips around the edge of the ceramic insulator are permitted with this condition:
      - a) Each chip is less than a radial width of 0.02 in. (0.5 mm).
    - 3) If you find cracks, scratches or missing pieces, replace the igniter.
    - 4) If you find signs of burning on the ceramic insulator, replace the igniter.
    - 5) If you find the ceramic insulator loose, replace the igniter.
  - (b) Look for carbon tracks in the ceramic insulator:

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- If you find carbon tracks, do these steps:
  - a) Make a swab, G01659 moist with alcohol, B00130.
  - b) Clean the carbon tracks from the ceramic insulator.
  - c) Dry the alcohol, B00130 from the insulator with a cotton wiper, G00034.
  - d) If you cannot remove the carbon tracks, replace the igniter.

#### SUBTASK 74-21-02-212-002-G00

- (2) Examine the firing tip of the igniter for these types of damage:
  - (a) Look for cracks, holes and pieces that are missing.
    - 1) If you find cracks, holes or pieces that are missing, replace the igniter.
  - (b) Look for worn areas on the igniter shell caused by contact with the combustion chamber ferrule:
    - 1) If the worn area decreases the igniter diameter more than 0.003 in. (0.08 mm), replace the igniter.

#### SUBTASK 74-21-02-220-001-G00

- (3) Examine the igniter electrode for erosion (DIMENSION A):
  - (a) Use a micrometer (0-1 inch, readable to 1/1000 inch), STD-1096 to measure the distance from the flat surface of the firing tip to the top of the center electrode:
    - 1) If the distance is more than 0.300 in. (7.62 mm), replace the igniter.
  - (b) Measure the inner diameter of the firing tip shell as follows:
    - 1) Use a dial caliper, STD-1303 to measure the erosion on the outer electrode shell.
    - 2) If the inside diameter of the shell is more than 0.275 in. (6.99 mm) on the short axis (DIMENSION C) and more than 0.300 in. (7.62 mm) on the long axis (DIMENSION B), replace the igniter plug.

#### SUBTASK 74-21-02-212-003-G00

- (4) Examine the external shell of the igniter for these types of damage:
  - (a) Look for damage to the threads or more than 10% loss of silver plate.
    - 1) If you find damage on the threads or more than 10% loss of silver plate, replace the igniter.
  - (b) Look for damage to the hex nut flats on the igniter body.
    - 1) If the flats have damage and you cannot apply the correct installation torque, replace the igniter.

#### SUBTASK 74-21-02-280-001-G00

- (5) Examine the igniter plug for loose or broken internal parts:
  - (a) Remove spacing gasket by threading the gasket off lower shell.
  - (b) Hold the igniter plug and shake it with force.
  - (c) If you hear rattle sound, this indicates loose or broken internal parts, do this step:
    - 1) Replace the igniter plug.
- I. Put the Airplane Back to Its Usual Condition

#### SUBTASK 74-21-02-410-006-G00

(1) Install the igniter plug 1 and/or igniter plug 2 (Left Igniter Plug Installation, TASK 74-21-02-400-801-G00 and/or Right Igniter Plug Installation, TASK 74-21-02-400-802-G00).

SIA ALL



#### SUBTASK 74-21-02-860-012-G00



OBEY THE INSTRUCTIONS IN THE PROCEDURE TO CLOSE THE THRUST REVERSERS. IF YOU DO NOT OBEY THE INSTRUCTIONS, INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT CAN OCCUR.

- (2) Do these tasks in sequence to safely close the applicable left or right thrust reversers:
  - (a) Do this task: Close the Thrust Reverser (Selection), TASK 78-31-00-010-802-G00.
    - 1) Close these access panels:

<u>Number</u>	Name/Location
415	Left Thrust Reverser, Engine 1
416	Right Thrust Reverser, Engine 1
425	Left Thrust Reverser, Engine 2
426	Right Thrust Reverser, Engine 2

- (b) Do this task: Close the Fan Cowl Panels (Selection), TASK 71-11-04-410-801-G00.
  - 1) Close these access panels:

<u>Number</u>	Name/Location
413	Left Fan Cowl, Engine 1
414	Right Fan Cowl, Engine 1
423	Left Fan Cowl, Engine 2
424	Right Fan Cowl, Engine 2

(c) Do this task: Thrust Reverser Activation After Ground Maintenance, TASK 78-31-00-440-801-G00.

## SUBTASK 74-21-02-860-013-G00

(3) Do this task: Leading Edge Flaps and Slats - Activation, TASK 27-81-00-440-801.

#### SUBTASK 74-21-02-860-014-G00

(4) For the applicable engine, remove the safety tags and close these applicable circuit breakers:

## **CAPT Electrical System Panel, P18-2**

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
Α	1	C00458	<b>ENGINE 1 IGNITION RIGHT</b>
Α	3	C00153	<b>ENGINE 1 IGNITION LEFT</b>

## F/O Electrical System Panel, P6-2

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	4	C00459	<b>ENGINE 2 IGNITION RIGHT</b>
D	6	C00151	<b>ENGINE 2 IGNITION LEFT</b>

## F/O Electrical System Panel, P6-5

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
Е	1	C04016	<b>ENGINE 1 IGNITION PWR CONT</b>
Ε	2	C04017	<b>ENGINE 2 IGNITION PWR CONT</b>

### SUBTASK 74-21-02-860-015-G00

(5) Do these steps to remove the DO NOT OPERATE tags, STD-858, from the applicable ENGINE START switch and START LEVER switch:

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## **LEAP-1B ENGINES**



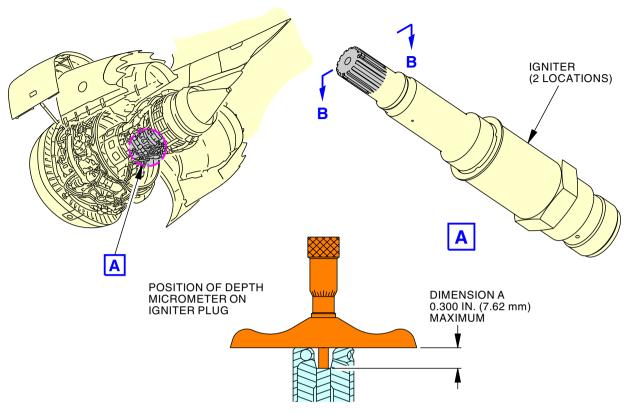
# 737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

- (a) On the P5 overhead panel, remove the DO NOT OPERATE tag, STD-858, from the applicable ENGINE START switch.
- (b) On the P10 control stand, remove the DO NOT OPERATE tag, STD-858, from the applicable START LEVER switch.

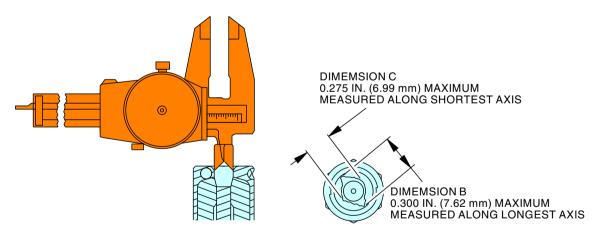
----- END OF TASK -----

SIA ALL





# MEASURING CENTER ELECTRODE EROSION 8-8



MEASURING SHELL EROSION

B-B

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Igniter Inspection Figure 601/74-21-02-990-802-G00

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ECCN 9E991 BOEING PROPRIETARY - See title page for details

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